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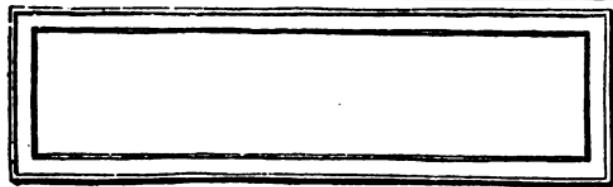
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The Cost of Living
Walter E. Clark

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The National Social Science Series

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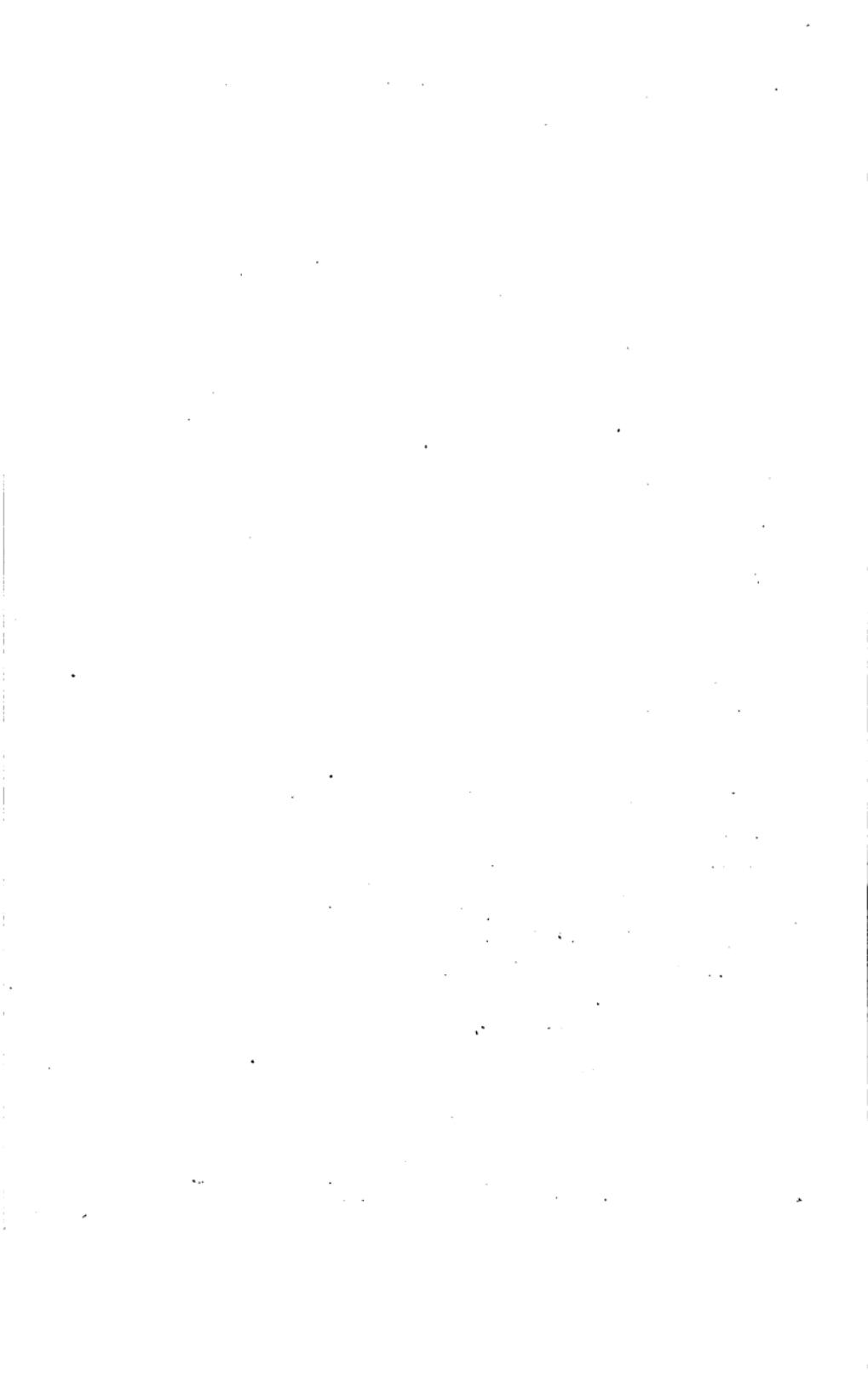
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THE COST OF LIVING

BY

WALTER E. CLARK

Ph.D. (Columbia)

*Professor and Head of the Department of
Political Science in the College of
the City of New York*



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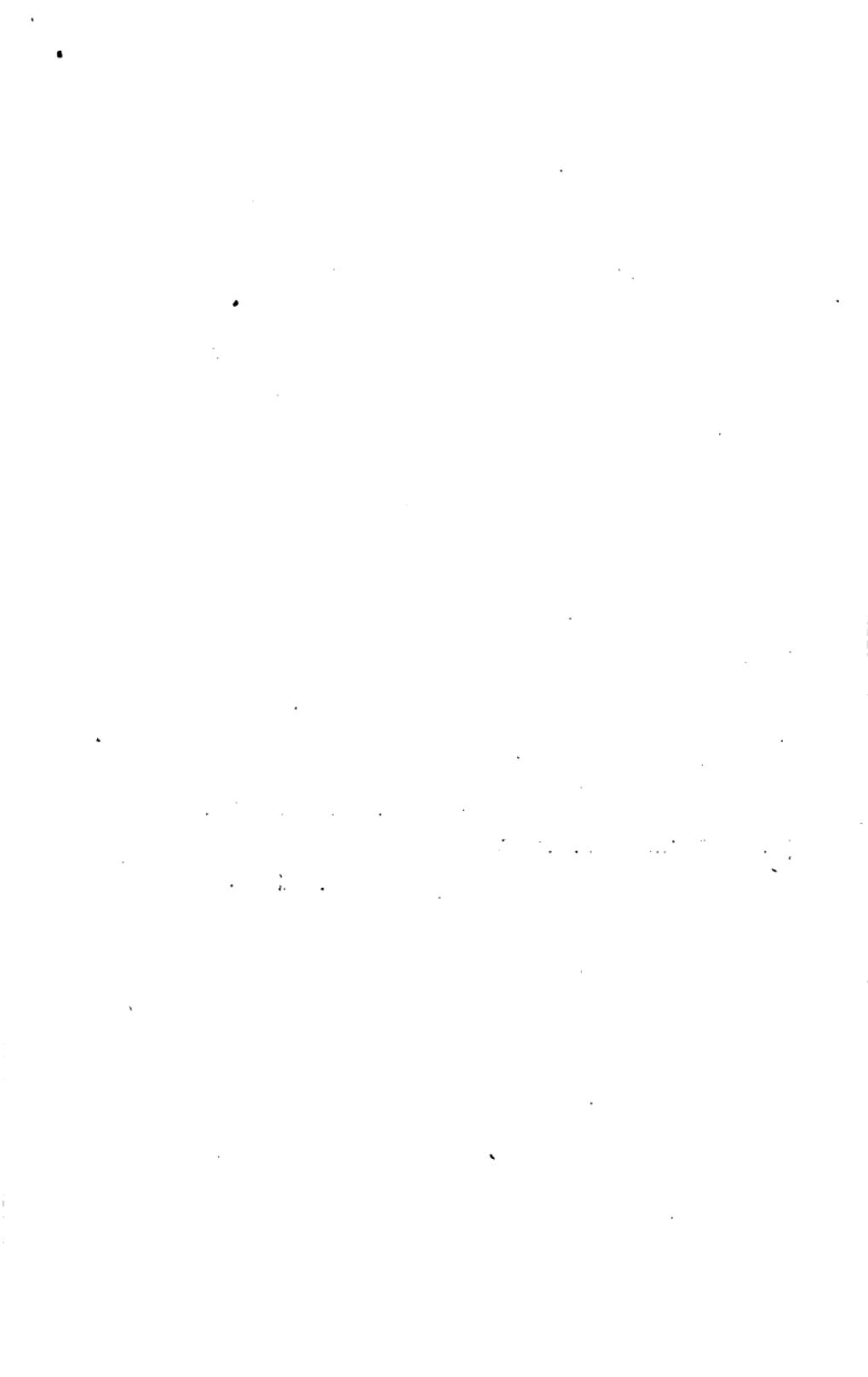
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EDITOR'S PREFACE

RISING prices have been a topic of conversation in many parts of the land during the last decade. In response to this feeling, legislation has been proposed and commissions authorized to investigate the causes of high prices. Professor Clark has been an earnest student of price phenomena for a number of years. The book that he writes does not advocate a theory or pursue some specific for price troubles, but presents a brief statement of facts about prices. Devoted to this purpose, the book should be welcomed by those seeking accurate information about the price phenomena of recent years.

F. L. M.

451912



AUTHOR'S PREFACE

THIS little book aims to set forth the needful facts and conclusions about rising prices. It seeks to be simple, yet scientific; to be brief without sacrificing either proof or color. It emphasizes the large gains due to rising prices. It attempts to discriminate between "remedies" which may reach the cause and those which are irrelevant. It tries to show the high probability that the rise of prices will be retarded or stopped by natural checks before there is pressing need to apply artificial checks.

Pursuit of these leading aims of the book develops its main variations from most books on this topic—its reason for being.

WALTER E. CLARK.

The College of the City of New York,
April, 1915.



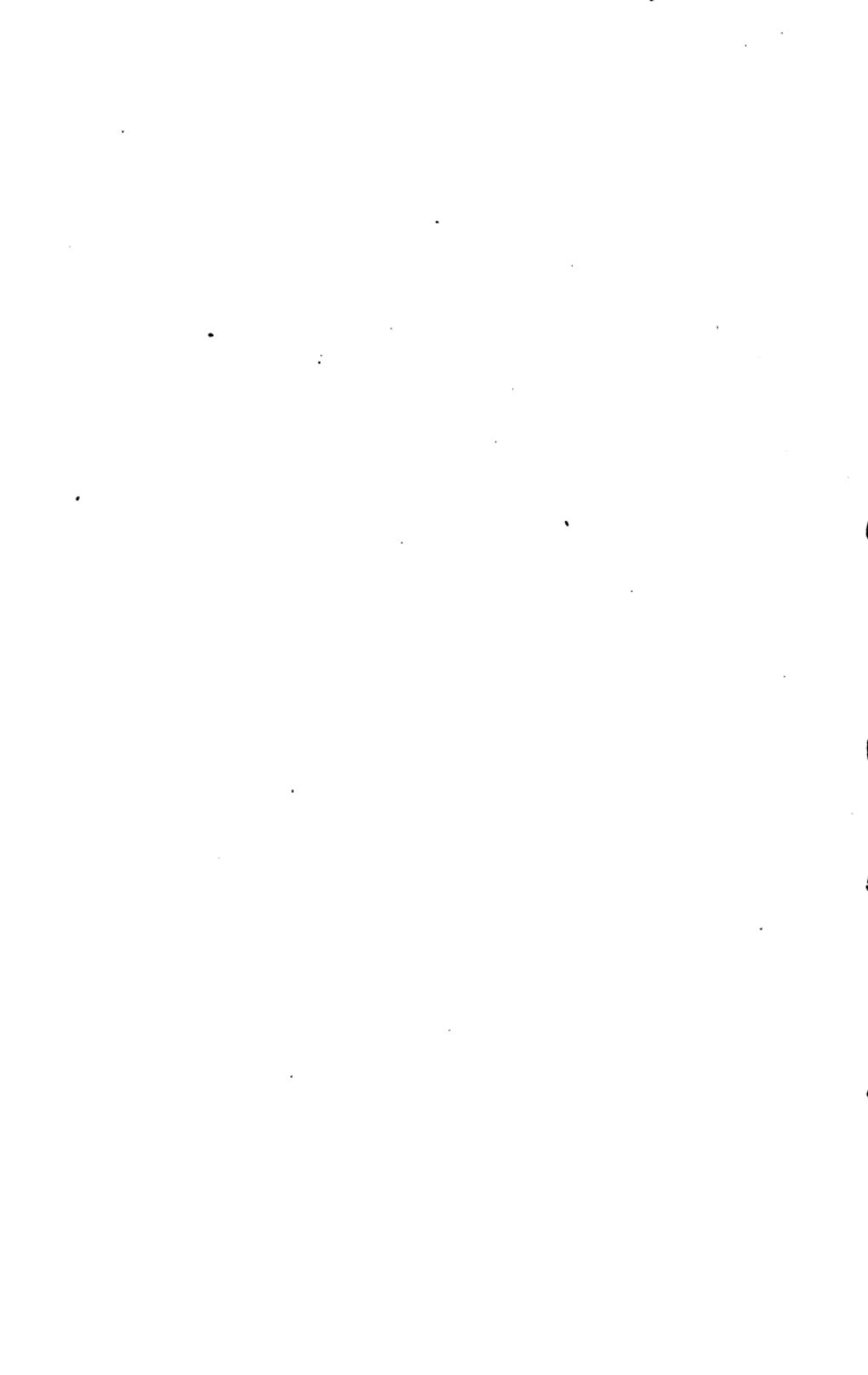
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THE COST OF LIVING



JOURNAL OF
CALIFORNIA

THE COST OF LIVING

CHAPTER I

THE FACTS

HE was from Missouri, and a minister. He spoke to his butcher over the 'phone: "Send me a dollar's worth of sirloin steak this afternoon. Tell your delivery boy if no one is here when he calls, just to poke the steak through the keyhole." A dollar's worth of any other kind of meat, of flour, of eggs, of milk, or of butter, could be poked through a much smaller keyhole today than eighteen years ago. The price of a full dinner pail in 1896 would not fill that pail much over half full today.

If our Missouri minister lived in St. Louis, his sirloin steak would have cost him last December from twenty-four cents to thirty cents a pound, depending on his butcher and his cut. The same meat in the middle nineties would have cost him just about one-half as much. Sliced ham, which he used to buy for ten cents

The Cost of Living

to twelve cents per pound, would have cost him twenty-five cents to thirty cents. Eggs that formerly cost him twenty cents to twenty-five cents a dozen in mid-winter now quote at forty cents to forty-five cents. Potatoes have risen from fifty cents or seventy-five cents a bushel to \$1.25, and milk that retailed in the nineties for five cents a quart now cuts into the ministerial income nine cents for each quart. When such facts as these are in mind, along with the fact of the meagerness and slow increase of ministerial salaries, an increased respect for the American sense of humor is due in the presence of a minister who can joke when he orders his family meat.

I. Retail Prices in the United States

Scientific proof that food prices are soaring is given in the price range of fifteen selected food articles published in bulletins of the Federal Bureau of Labor Statistics. The Bureau has listed, painstakingly, the actual retail prices of these fifteen food articles in the markets of forty important American industrial cities. These cities are scattered from Boston, New York, and Charleston on the east, to Seattle, San Francisco, and Los Angeles on the west,

and from Buffalo, Chicago, and St. Paul in the north, to Atlanta, New Orleans, and Dallas in the south. Their combined population is one-fifth of the whole population of the United States. The people of these forty cities may then be regarded as fairly representative of the industrial population of the whole nation and the markets of these cities may be regarded as typical.

Outlay for these fifteen articles constitutes two-thirds of the whole food cost, and the food cost constitutes from forty per cent to forty-five per cent of total living cost to an average American workingman's family. The significant character of this table of prices is thus made manifest.

For purposes of comparison, the prices of each article for the years 1890 to 1899, inclusive, have been averaged and that average in each case is called 100. The average price for each year is then stated in relation to this average for the decade of the nineties. From the full table* resulting, the following items have been selected and tabulated to show the rapid, steady rise of cost of living in the United States during the past eighteen years:

* This full table is given for reference in *Appendix A*, see page 157.

RETAIL PRICES OF FOOD ARTICLES IN THE UNITED STATES *

Commodity—	<i>Average Prices for</i>					
	1890-99	1896	1900	1907	1910	1913
Sirloin Steak.....	100	98.8	107.1	116.7	134.0	171.3
Round Steak.....	100	100.5	109.8	128.4	149.9	199.5
Rib Roast.....	100	99.4	109.3	123.0	137.7	172.0
Pork Chops.....	100	97.8	108.9	140.9	178.3	213.8
Bacon, smoked.....	100	96.3	110.3	157.7	204.4	225.9
Ham, smoked.....	100	96.5	106.9	131.0	159.4	181.2
Lard, pure.....	100	92.1	104.9	133.5	172.9	166.6
Hens	100	96.1	99.6	131.3	155.0	171.8
Wheat flour.....	100	94.2	94.6	118.2	135.9	127.4
Corn meal.....	100	92.8	95.6	133.5	147.9	160.4
Eggs—strictly fresh.	100	90.3	99.1	138.2	158.2	174.8
Butter—creamery	100	93.1	101.2	127.3	139.9	153.2
Potatoes—Irish	100	78.8	92.8	122.2	119.5	151.2
Sugar—granulated ..	100	96.2	103.9	98.7	102.5	95.3
Milk	100	100.1	100.0	118.9	131.6	140.2

Average for the

fifteen articles... 100 94.9 102.9 128.0 148.5 167.0

The 1913 column of this table shows the great price increases. Smoked bacon is listed at 225.9, which is to be compared with 100 as representing its average price in the decade

* The price figures for 1914 and 1915 have not been used in this book because the war conditions are abnormal. Records of price fluctuations, due primarily to such abnormal and probably temporary conditions would not contribute to an understanding of the problem with which this book deals, but rather would tend to cloud the issue.

1890 to 1899. This means that smoked bacon was, on the average for forty industrial cities of the United States, more than 125 per cent higher in price in 1913 than in the nineties, or nearly 130 per cent higher than in 1896. Pork chops, too, had more than doubled their average price for the nineties, and round steak had almost doubled its price. The other meats, and eggs, had risen about seventy-five per cent above their nineties average. Three items only out of the fifteen, wheat flour, milk and granulated sugar had risen less than fifty per cent. Sugar is the solitary item in the entire list which had risen less than twenty-seven per cent. Sugar is a most notable exception, since it was in 1913 nearly five per cent cheaper than on the average for the nineties and was actually about one per cent cheaper than in 1896, the year of lowest prices.

For the whole fifteen articles combined this table shows a price rise sixty-seven per cent above their average price for the nineties, and nearly seventy-six per cent above their average price for the year 1896, the year since which prices have been rising steadily. Omitting granulated sugar, the remaining fourteen items show, in 1913, an averaged retail price seventy-two per cent higher than in the nine-

ties and eighty per cent higher than in the lowest year, 1896. It is notable, too, that for the last four months of 1913 the general average price for the fifteen articles was the highest in the whole eighteen years of rising price, being nearly 71.4 per cent above the nineties average, or nearly eighty per cent above the average for the lowest year, 1896.

Surely the past eighteen years in the United States have so dwarfed the food package to be bought for one dollar that it is a rather grim humor which suggests that it might be poked through a keyhole. And surely these official retail price figures for forty leading industrial cities demonstrate that it is not mere rhetorical exaggeration, but the speaking of plain truth to say that the price of the full dinner pail in the United States of 1896 would fill that same pail little over half full in 1913.

2. Retail Prices in Canada

Figures from Canada and from Great Britain show that retail prices in both of those countries have been rising. The Canadian Department of Labor has calculated from current retail prices, gathered since 1908 only, the typical weekly average expenditures for a family of five with an income of \$800 per year.

TYPICAL WEEKLY EXPENDITURE FOR A CANADIAN FAMILY
OF FIVE PERSONS WITH AN INCOME OF
\$800 PER ANNUM

Year	Food	Rent	Fuel,		Total
			Light, Etc.		
1909	\$6.875	\$2.999	\$1.786		\$11.660
1910	7.127	3.397	1.827		12.351
1911	7.481	3.315	1.766		12.562
1912	7.823	3.897	1.941		13.661
1913	7.702	4.077	2.025		13.804

The increase at the end of 1913 as compared with the cost at the beginning of 1909 was, for food twelve per cent, for rent 35.9 per cent, for fuel, lighting, etc., 13.4 per cent, and for total expenditure 18.4 per cent. This shows a rise in general living cost to the representative Canadian workingman's family of over eighteen per cent in the last four years!

The American retail price tables given above show that the fifteen selected food articles rose nineteen per cent from 1909 to 1913. This compares with the twelve per cent food cost rise in Canada during the same years. The only other living cost items for which the *retail* United States prices are given for some years by the Federal Bureau are anthracite and bituminous coal. Figures for these cover the period 1907 to 1913 only, and show a rise, for this period, in average prices, of nine and two-tenths per cent for anthracite, and five and

four-tenths per cent for bituminous coal. These figures compare with the Canadian rise of 13.4 per cent in fuel, lighting, etc., from 1909 to 1913.

3. Retail Prices in Great Britain

In the *Abstracts of Labor Statistics* for the United Kingdom the official British retail prices for twenty-three selected food articles are given. The index numbers average the retail prices of these twenty-three articles year by year and are weighted in accordance with expenditure in wage earners' families. They are given here to show the shrinkage in the British dinner pail content for a given expenditure, in recent years, as compared with the later nineties.

WEIGHTED INDEX NUMBERS IN THE UNITED KINGDOM FOR RETAIL PRICES OF TWENTY-THREE SELECTED FOOD ARTICLES

Average Price for 1900, 100

Year	Index No.	Year	Index No.
1896	91.7	1905	102.8
1897	95.5	1906	102.0
1898	99.5	1907	105.0
1899	95.4	1908	107.5
1900	100.0	1909	107.5
1901	100.4	1910	109.4
1902	101.0	1911	109.4
1903	102.8	1912	114.5
1904	102.4	1913	114.8

This table shows that retail food prices, in Great Britain, were in 1913, 14.8 per cent higher than in 1900, and 25.2 per cent higher than in 1896, the year of lowest British retail prices.

4. Wholesale Prices in the United States, Canada, and Great Britain

These three nations publish wholesale price lists which cover a far wider range of commodities. These wholesale lists may be taken as the best indicators of the *rise of general prices* during the last eighteen years.

For the United States, the Bureau of Labor Statistics publishes the course of wholesale prices of two hundred and fifty-two commodities. The average price for the decade 1890-99 is the base also in this table, and the figures representing all of the commodities are averaged for each year to give the *index number* for the whole two hundred and fifty-two commodities. *Bradstreet's Journal* follows the wholesale prices, for the United States, of one hundred and six commodities in general use. The actual prices per pound of the several commodities are added together to give the index numbers of this table. They are

listed here for comparison with the Federal Bureau's table.

The Canadian Department of Labor, using the same 1890-99 base years, and the same index number methods as are used by the United States Bureau, lists the wholesale prices of two hundred and seventy-two Canadian commodities. The British reports cover the wholesale prices of only forty-seven commodities, use the one year 1900 as the base, and weight the prices according to annual consumption of these articles in the United Kingdom. These British figures are not, therefore, comparable with those in the American and Canadian tables, but they are listed with the others because they indicate the trend of British prices. The year of lowest prices since 1890 was 1896 in the British table, and 1897 in the tables for the United States and for Canada. The prices are, therefore, given from 1896 on, in the following table:

**INDEX NUMBERS OF WHOLESALE PRICES IN GREAT BRITAIN,
CANADA, AND THE UNITED STATES, 1896 TO 1913**

Year	Great Britain	Canada	United States	Bradstreet
1896	88.2	92.5	90.4	\$5.9124
1897	90.1	92.2	89.7	6.1159
1898	93.2	96.1	93.4	6.5713
1899	92.2	100.1	101.7	7.2100

Year	Great Britain	Canada	United States	Bradstreet
1900	100.0	108.2	110.5	7.8839
1901	96.7	107.0	108.5	7.5746
1902	96.4	109.0	112.9	7.8759
1903	96.9	110.5	113.6	7.9364
1904	98.2	111.4	113.0	7.9187
1905	97.6	113.8	115.9	8.0987
1906	100.8	120.0	122.5	8.4176
1907	106.0	126.2	129.5	8.9045
1908	103.0	120.8	122.8	8.0094
1909	104.1	121.2	126.5	8.5153
1910	108.8	124.2	131.6	8.9881
1911	109.4	127.4	129.2	8.6886
1912	114.9	134.4	133.6	9.1867
1913	116.5	135.5	135.2	9.2115

The similarity both in range, and year by year, of the Canadian and the American returns is striking. It is notable that, while the range of British prices is not so great as that for the new world countries, the general trend is the same. All three tables registered their lowest points in 1896 or 1897. Their index figures rise fairly steadily until 1908, when they all drop off sharply, registering the effects of the world financial depression in that year. All three again rise steadily from 1908 until 1913. The year of highest average price in each table is the year 1913. The figure for 1913 as compared with that of the lowest year shows a rise in average wholesale prices in the seventeen years since 1896-97 of over

thirty-two per cent in Great Britain, of nearly forty-seven per cent in Canada, and of over fifty per cent in the United States.

5. Rising Prices in Other Countries

Similar returns are given in the price tables for France and for Germany, those for France corresponding a little more closely to the British returns and those of Germany to the returns of Canada and of the United States. Before the war came great popular processions in Vienna were clamoring that the government take action to relieve suffering caused by rising prices. Switzerland made an official investigation into the rising cost of living in 1911, and, in 1912, a Public Commission reported on the Cost of Living in New Zealand. Even from the far interior of China report comes that prices are now nearly double what they were eighteen or twenty years ago.

6. The Purpose of the Book

Enough has here been given to show that prices are rising all over the world and that everywhere men are observing them, are searching out their causes and their effects. It is fitting that people of the United States, when general prices have risen steadily and rapidly

for many years, should study this, *the most notable experience which the whole world is having in common during this generation.* It is the purpose of this book to outline the way for such study. This chapter has attempted to suggest the answers to such queries as: How generally, and to what degree, and during what period have prices risen? Coming chapters in order will seek to outline answers to the queries: How are prices made? Why are prices rising? What are the effects of rising prices? What are the natural checks upon rising prices and what artificial means might be used effectively to check or to stop the rise of prices?

CHAPTER II

MONEY AND PRICES

Men measure the worth of things they buy and sell. As a value-measuring unit they choose some definite amount of some given thing. Today that chosen thing is gold throughout the world. The definite amount of gold used as the measuring unit is set arbitrarily by the government of each nation. For example, the standard gold dollar in the United States* must contain, by the arbitrary fiat of the government, 25.8 grains of standard gold. Standard gold, by the same arbitrary fiat, must be nine-tenths pure gold. In effect, then, the measuring unit of value in the United States is, and has been since 1837, 23.22 grains of pure gold. When an alleged watch sells for one dollar, the value of that watch is equal to the value of 23.22 grains of pure gold.

1. The Primary Money Unit

The thing, a definite amount of which a government fixes as the measuring unit, is called

* Throughout this book the term *United States* means *United States of America*.

the primary money medium. In accord with government specifications as to weight, shape, size, engraving and percentage of the pure money medium contained, the government mints issue what are known as the primary coins of the realm. Such primary coins are called the primary money of the realm. Thus, \$2.50, \$5, \$10, and \$20 gold pieces are the primary coins or the primary money of the United States. Gold one dollar pieces have not been coined since 1890, but this does not change the legal fact that the standard gold dollar is the value-measuring unit. Five dollar and ten dollar gold pieces, as they come from the mints, contain respectively five and ten times the amounts of standard and of pure gold which the coinage law specifies for the one dollar gold piece.

A government may have coins made of other metals also, and may legalize the issue of paper notes. Such coins and notes are really representative of primary coins, and should properly be called representative money. Thus, in the United States, copper cents, silver dollars, and "greenbacks" are representative of gold coins. It is by law declared that the Secretary of the Treasury shall keep all monies of the nation at a parity, and obedience to this

command, in last analysis, involves redemption in gold of all other lawful forms of money. All legal dollars of the United States may well "look alike" to any user of money, for each of them must be the equal of the standard gold dollar; that is, the equal in value of 23.22 grains of pure gold.

People of the United States, then, measure the worth of shoes or snuff, lanterns, or day's labor, the worth of any and of all things and services in money; that is, in grains of gold. Such measurements are stated in dollars, and so stated are called prices.

2. The Effect of Demand on Prices

During the great blizzard in 1889, milk sold for as high as one dollar a quart in New York City. Cut off wholly from its outside sources of supply, the city was compelled, during its storm-bound days, to depend upon the chance unsold remnant of the first storm day's supply. Eager bidders for this scant supply quickly drove a six-cent article up to the dollar point. This illustrates the simple truth that when a community's purchasing power and its demand for a given thing remain the same as usual, but the supply of that thing becomes much less than usual, the price of that thing will rise.

In early season strawberries may sell for a quarter a box. But later the red boxes pour into the markets and better berries than the first comers may sell for a dime a box. This seasonal range of berry prices finds counterpart in the price range of anything when the community's purchasing power and demand for that thing remain about the same while the supply of that thing becomes much greater.

When Peter de Hooghe, "he of the velvet brush," was painting his cheerful pictures, fifteen to twenty-five dollars would buy one of them. The number of his genuine works has, perhaps, not changed since his death. Discriminating art critics have awakened the art loving world to high appreciation of the simple, peaceful, domestic sunshine which radiates from a De Hooghe canvas. The growing demand for his paintings has so raised their price that one of them will now bring a thousand times what it brought when the artist lived. In this case the supply of the thing has remained the same, but the demand for it has so increased as to bring largely increased price.

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The supply of such sets is probably somewhat less than it was in the earlier nineties, when such sets sold for over two hundred dollars. The explanation is simple. They are out of date. Few people care to give them even shelf room. Their price has dropped as the price of anything drops when, the supply remaining the same, the demand for the thing is much less than before.

These four cases may be summarized in one sentence: Other things all remaining the same, the price of anything rises when either the supply of that thing decreases or the demand for it increases, and the price of anything falls when either the supply of that thing increases or the demand for it decreases.

3. Gold Subject to Supply and Demand

One further step now will aid to clearer understanding later. Gold is a thing, bought and sold, just as other things are. Just as other marketed things, it is useful to man and it is limited in its supply relative to man's need for it. It is subject, then, to the same supply and demand conditions which affect man's measurements of the usefulness to him of other things. Increase its supply greatly, without changing the demand for it correspondingly,

and man rates a unit of it as worth less to him, or gold may be said to grow cheaper. Increase the demand for it greatly without correspondingly increasing its supply, and man rates a unit of it as worth more to him than before, or gold may be said to grow dearer.

All this may seem very clear and simple, but confusion enters easily when attempt is made to bring together this thinking about the *prices of other things* and this thinking about the *value of gold*. In the world's price-making the values of all other marketed things are estimated in terms of money; that is, as shown above, in terms of gold. Men grow accustomed to state all valuations in these money or gold terms. It is easy, then, for them to state their valuation of gold itself in terms of money without realizing that in so doing they are moving in a closed circle. For example, an easy blunder for a man to make is that he insist that the value of gold has not changed in the United States since 1837, because the United States mint has been ready practically* to pay exactly one dollar for each 23.22 grains of pure gold all these years, and is so ready today. It is clear that the *price*

* For the purposes of this argument, the slight charge to cover the cost of the alloy, etc., is negligible.

of gold has not changed since 1837, and he cavalierly moves at once to the proposition that the *value* of gold has not changed. He does not see that to talk about the price of gold is to define a thing in terms of itself. *The dollar in the United States is*, practically, 23.22 grains of gold, so fixed by law, and, so long as this remains the law, so long, of course, will 23.22 grains of gold be *priced* at one dollar, which means no more than to say that 23.22 grains of gold are equal to 23.22 grains of gold. Obviously, the gold price of gold cannot change.

4. The Ratio of Gold to Commodities

Men say the price of wheat rises or falls, from time to time, because they measure its usefulness in terms of another thing, viz., gold. By continually assuming that that other thing, *gold*, is *unvarying in value*, they are led to conclude that all variations in the price of wheat must be due alone to variations in the supply of wheat or in man's need for wheat. By wholly overlooking the facts that gold itself is a thing and may itself be varying in value, they are overlooking the fact that variations in the supply of gold itself may cause variations in the price of wheat, quite apart from

any change in the supply of wheat or in man's need for wheat. But no man can be guilty of this oversight and yet be clear in an understanding of prices. In order that this fatal oversight may be avoided, increased gold supply will be dealt with in the second chapter following, as a demand cause of rising prices.

We noted in the foregoing chapter that the prices of things generally have been rising all over the commercial world for nearly a score of years. Having prepared ourselves for later analysis by a brief study of price relations in this chapter, we must next try to find the causes of this protracted and general rise in prices.

5. Some Causes for Rise of Prices

Many alleged causes have been cited during the past decade of world-wide discussion about rising prices. In an age which boasts itself scientific, a free-for-all, easy-chair guessing contest has gone on. To the query: "What causes prices to rise?" every group in the United States has guessed its answer. The farmer guesses "excessive railway freight charges," and the railway man guesses "unscientific farming"; the union labor man guesses "trusts," and the big manufacturer retorts

"unionist restriction of output and enforcement of high wages and short hours." One great political party guesses "Mother High Protection and her stalwart son, the Trust"; another "disappearing free lands, increasing population and increasing gold supply"; a third, "the wickedness of things in general under the reign of profit-taking capitalists," and a fourth would relieve the family budget strain by exorcising Demon Rum. The pulpit guesses "extravagant indulgence in the flesh-pots and sinful speculating," while at least one master speculator finds his "remedy" in squeezing the water out of other people's stocks. The ultimate consumer is sure the middleman is principally to blame, and the middleman is just as sure it is the trust magnate or the rent-raising landlord. The publicist explains by means of increasing population pressure, the economist suggests diminishing returns from land and increasing gold supply, and meanwhile everybody is sure that the world war is now rocketing prices. Here is the multitude of counsellors—the puzzle being to find the wisdom. Possibly we may at least approach nearer the truth if we pass in review a number of these alleged causes, making brief study of each in the light of some facts.

The short study of price relations in this chapter suggests a classification under which some of these alleged causes may be analyzed in following chapters. It has appeared that things rise in price when, other conditions remaining the same, either their supply decreases or demand for them increases. Some of these alleged causes, then, if they are real causes, must push prices upward by restricting supply, others by increasing demand.

In the first class, the alleged Supply Causes, may be listed :

- a*—Exhausting natural resources.
- b*—Retailers' undue profits and short weights.
- c*—Adulterated goods.
- d*—Cold storage.
- e*—Labor unions.
- f*—Excessive transportation rates.
- g*—Tariff.
- h*—Trusts.

In the second class, the alleged Demand Causes, come :

- a*—Increasing population and immigration.
- b*—Speculation.
- c*—Extravagance and waste.
- d*—Rising standard of living.
- e*—Increasing gold supply.

The next two chapters will be devoted to brief treatments of these alleged causes in the order here given.

CHAPTER III

SUPPLY CAUSES

BRIEF analysis of alleged causes which must appreciably curtail supply of things if they are real causes of rising prices, should show their merits.

i. Exhausting Natural Resources

Have the natural resources of the United States been exhausted as compared with their richness prior to 1890, to an extent which makes this exhaustion an appreciable cause of rising prices?

Free arable land of good quality has practically disappeared in the United States. The tens of millions of acres of public lands still listed as "unappropriated" have been closely culled until little remains that is not swamp, desert, or mountain. Homesteaders of these days are settling the bench lands and starving out their five years' period in fond hope that some irrigating scheme may materialize and make it worth while to pay taxes on their quar-

ter sections. Occasionally the restrictive cordon is drawn closer about some dwindling band of Indians and the resulting rush of claimants for the newly opened reservation lands usually records a score of applicants for each quarter section offered.

The annual tens of thousands of intelligent and sturdy farmers who, in recent years, have been emigrating from the United States to Canada are eloquent and lamentable evidence that promising free or small-cost farming opportunities cannot now be found in this United States. What a contrast with the United States of a generation ago, lavishly endowing education, and railways, and homesteaders by the ten thousand, with lands from a public domain that seemed inexhaustible!

And the story of free lands is paralleled by the story of white pine, of oil, of coal, or of iron ore. Only yesterday "inexhaustible" seemed the word to use with reference to the land's supply of each of these basic things. Tall, straight pines stood thickly miles and miles in seemingly endless tracts, crude oil was spouting in geysers and begging for market at a few cents a barrel, black diamond beds seemed to assure endless riches of energy for the country's industries, and rich hills of iron

ore lay in ranges ready for surface scoops. But unless artificial forestation renews the pine woods clear white pine boards will soon be found in museums only, relics of a squandered patrimony.

Whole areas, only a short time ago gushing with cheap oil, are now almost wholly drained and each new field opened passes rapidly from the geyser period through the flowing-well period to the fading days when a score of one and two barrelers are hooked up to each central pump. One generation found huge oil lakes just west of the Alleghanies and drained them dry, hurried on to stud Texas and California fields with creaking derricks, and now stands at the Rio Grande, gazing almost covetously at the new oil geysers in a neighboring land.

One single generation has exploited, well toward the exhaustion point, the "rock oils" of half a continent, at the creating and storing of which Nature had been busy millions of years! And men are beginning to predict the not distant day when even the Mesaba and the Vermilya ore ranges must be abandoned as worked out—a day when leadership in steel production may pass to Mexico or to China or to Africa.

Once a large exporter of food stuffs and raw materials, the United States is slowly, steadily approaching the time when it will consume its own entire output of such goods. In 1898 the United States imported, under the general tariff act, unfinished lumber valued at \$1,897,305.37; corresponding figures for 1907 and 1913 were \$14,623,256.02 and \$18,907,-345, respectively. In 1898 it imported 1,374 barrels of wheat flour; in 1907, 48,005 barrels and in 1913, 107,555 barrels. In 1898, under the general classification of pig iron, the import was valued at \$143,392. Similar imports in 1907 were valued at \$5,862,930, and in 1913 at \$6,402,555.

Per-capita production of wheat in the United States has decreased markedly. For the period 1876 to 1885 the average annual yield per capita was eight and three-tenths bushels. For the period 1906-1908, it was seven and nine-tenths bushels and it sank further in 1910-1912 to only seven and one-tenth bushels per capita, falling as low as six and six-tenths bushels per capita in the single year 1911.

The cattle product of this country has been decreasing absolutely in recent years, while the population has been steadily rising. The

cattle product figures are: 1910—71,099,000 head; 1911—69,080,000; 1912—57,958,000, and 1913—56,527,000. Comparison over the longer period shows that in 1890 the United States produced per capita sixty-nine one-hundredths of a head of cattle; in 1900 the production fell to fifty-eight one-hundredths head per capita, then the lure of better prices caused a rise climaxing in 1910, with a production of seventy-seven one-hundredths of a head per capita. The steady decline followed, showing in 1913 a per capita production of only fifty-seven one-hundredths head, a low record.

The stern enforcement of State and Federal condemnation laws respecting cattle affected with tuberculosis and with the dreaded foot and mouth disease, added to the lure of high hoof prices, will probably lower still further in years of the immediate future the already significantly low per capita production record of 1913. Many of the great cattle ranges of the West have been broken up by the encroachment of the farmers. The cowboy is rapidly giving way to the less picturesque man at the plow, aided often by extensive irrigation systems. The limited pasture fields of the fenced farms and the supplementary more

expensive grain feeding cooperate to diminish the cattle product. Resort to more extended corn feeding in turn increases the demand for corn and aids in explaining the rise from the twenty-eight cent corn of 1895-1900 to the seventy cent corn of recent years.

From the Federal Bulletin on wholesale prices for 1913 a selection of twelve basic food, fuel, and building supplies gives the following figures for the year 1913 as compared with the average, 100, for 1890-1899 inclusive: corn, 164.3; wheat 126.9; rye, 120.3; oats, 139.8; cattle, 179.7; hogs, 189.6; eggs, 166.5; milk, 138.4; bituminous coal, 169.7; refined petroleum, 138.5; white pine, 213.4 and yellow pine, 174. The average for the entire 252 commodities was 135.2. The above twelve commodity figures average a little over 160, showing that these twelve articles had registered a rise above their average prices in the nineties more than seventy per cent greater than the average rise for the entire 252 commodities. Perhaps this excess average price rise of these twelve staples above the level to which general prices have risen, may be ascribed to the exhaustion of the virgin gifts of a marvelously rich land.

The records, then, show that in the United

States free arable land has practically disappeared, cattle ranges are yielding to truck farms, the great forests of Maine and Michigan, Oregon and Washington have been ruthlessly mowed, three great oil producing areas are being rapidly drained, even mountain ranges of iron ore approach exhaustion, and the yellow harvests of the upper Mississippi valley are not keeping pace with the increase of population. Whatever changes may come, in the future, in the other factors which affect prices in the United States, it is altogether unlikely that these basic foodstuffs and raw materials will ever again be as cheap as they were in the closing years of the nineteenth century. The disappearance of the cream products of rarely rich new land is a real and a probably permanent factor in rising cost of living.

2. Retailers' Undue Profits

Is the retail system to blame for recent high prices?

Multiplied small tradesmen must cost the community more than if it were served its goods from a few large centrally located stores. The aggregated charges for rent, delivery, administration, and clerk service, as

well as the aggregate charges for interest and insurance on reserve stock and the writing off of losses through bad management, bad debts, perishable goods, and changes of fashion are much greater for a given volume of retail business if that business is divided among a thousand small stores than if it is concentrated in the hands of a score or fifty experienced merchants. Large scale industry cheapens cost just as clearly in the retail as in the manufacturing world.

It is the bitter fight among the small competitors that causes much of the short weight, false scale, and false measure practices which are now and then sensationaly discovered and headlined by some aggressive and ambitious reporter or commissioner of accounts. These petty dishonesties are not infrequently the last resorts of men and women whose moral sense is numbed in the presence of bankruptcy. If the buying public of the city demands a grocery store and a butcher shop on every block, if the housewife insists upon exercising a petty tyranny which demands that her pound of prunes and eighteen cent package of sugar shall be delivered within twenty minutes on implied penalty of the transference of her regal patronage to the next block, if the lanes

of ugly, illkept small shops must nightmare every section of the city, replacing modest lot rentals by the heavy front foot levies, possible even in small shop areas, then the community must pay the piper.

This is not meant to exonerate the petty rascals. Unquestionably, there is occasional more or less polite thievery in the retail business practiced deliberately by store-keeping crooks. Perhaps more than occasionally among such middlemen as produce-brokers can be found instances of such bold robbery as would disgust Dick Turpin or Jesse James. And the most serious feature of such instances is that one case affrights a township. If one farmer ships carefully selected apples to an agent and finds himself helpless to secure any redress when he is coolly informed that his apples did not bring enough to pay the freight, storage, and commission bills and that he therefore owes the broker a balance, this story goes the rounds of a wide neighborhood and good apples rot on the ground.

Here again the lack of system and centralization is doubtless a large factor. The robber broker, after all, is a twin brother to the covetous one in the fable who killed his goose to get a large supply of golden eggs at once.

How much better business for apple brokers as a class to have the word go round that neighborhood that a square deal was assured to all shippers of fruit, great and small.

3. Adulterated Goods

Adulteration systematically furnishes inferior goods. It has been estimated that the consuming American public pays out \$100,000,000 a year for adulterants, goods at their best harmless and in an estimated ten per cent positively harmful. Even the most harmless of such adulterants may prove disastrously harmful, if the bull is permitted. If a drug, for example, is seventy-five per cent "harmless" substitute for the real article the physician prescribes, the treatment may prove fatally ineffective. These systematic adulterating swindlers who advertise and sell rotten refuse preserved in benzoate of soda as first grade vegetables and fruits, who "guarantee" papier mâché to be solid leather, who palm off filled and mercerized cotton as silk, and who substitute iron for cork in the life preservers with which they equip a General Slocum, are some further aberrant products of that unregulated competition which has been such a fetich to many past English and

American thinkers and which, in fetich fervor, has been recently dictating high and erring policies in this land.

The out-of-joint system for the distribution of goods, treated above, and the system of adulterating goods, both keep prices higher at any time than prices would be if goods were pure and were distributed at a minimum cost. It does not appear, however, that either of these systems is a cause for the *generally rising* prices of the past eighteen years. If any causal relationship obtains, it may seem that the generally rising prices may be the spur which drives distributors and adulterants to invent some of their cheating methods.

On the other hand, the rising prices have also spurred other inventors to seek to cheapen retailing costs and to prevent adulteration. This past twenty years has recorded many such important inventions. During this time, pure food and drug laws have been enacted and more or less successfully enforced. The department store and the mail order systems have been rapidly and extensively developed. Chains of "cut rate" drug stores and of five and ten cent stores have spread over the land. The parcels post has brought together the producer and the consumer. The free public mar-

ket idea is gripping the imagination of the people. These things make for cheaper distributional costs and for purer foods and drugs.

The reasonable likelihood, then, is that the margin of higher-price level to be charged against bad distributive methods and adulterating systems is less today than it was before 1900. Certainly it is not enough greater so that either of these can be classed as an appreciable cause of the general rise of prices since the late nineties.

4. Cold Storage

Was it just a passing headline fancy that charged the cold storage system to be a criminal conspiracy to raise prices on essential food products?

Eggs may illustrate well, for it was "rots" and "spots" that made the editorial columns spangle with italics and large caps. The storers buy them—April fancy prime storage. Perhaps they are labelled "April primes" far into June, just as our painstaking forebears advisedly dated back their pine tree shillings to 1652, even though they were striking them off after the Stuarts had been restored to coinage sovereignty. The buying season is

over and the storage bins are filled with their thousands of crates of eggs. When the scant fresh-egg months come, these stored eggs begin to enter the market. If the storers are wise, every stored crate has been marketed before the first of April comes again—usually before the first of March. Cumulating interest and storage charges and steady if slow depreciation in the value of the stored eggs, as the months pass, compel the sale before a new spring laying season comes. What, then, has really happened? Has there been any diminution of egg supply during that twelve month because of the storage? Has there not been rather simply a redistribution of the supply throughout the twelve month?

Instead of the oldtime clogged market in April, May, and June, which often pushed eggs down to but a few cents a dozen, the storers buy freely then, and eggs seldom go below twenty to twenty-five cents a dozen. In the fall and winter months, when fresh eggs are very scarce and their price mounts to fifty, sixty, and even seventy-five cents a dozen, the cold storage crates supply the market with thousands of dozens of eggs and keep the egg prices from going as high in those months as they otherwise would go.

There is nothing in this process which compels the average price of eggs through the year to rise. On the contrary, if cold storage methods applied to eggs has had any effect on the annual average price, it has probably had the effect of somewhat lowering the prices. In the old days an egg producer was apt to be thoroughly discouraged by the fact that in that season of the year, when his hens laid freely, all other hens did the same. Eight cent and ten cent eggs did not pay him. The cold storage invention gives the egg producer some guarantee of a fair price in his active season. Undoubtedly, this is one of the reasons why American farm poultry produced in 1909 almost three hundred million dozens more of eggs than in 1899.

5. Labor Unions

Does organized labor so curtail the output of goods by its limitations of output, its restrictions on apprenticeship, and its successful demands for shorter hours, and does it force higher wages—all with the result that prices of life necessities rise primarily because of increased labor cost?

Anything like satisfactory data as to union activity along output restriction lines and as

to the relative productivity of the longer and the shorter working day are lacking. There is, however, evidence enough at hand to make it improbable that successful trade union activity is chargeable as an important cause of rising prices.

In treating the topic of exhausting resources above, twelve important food, fuel, and shelter articles were cited which, on the average, showed a price range for the year 1913 over sixty per cent higher than their price range for 1890-1899. The whole 252 articles listed in the Bureau table showed a price rise for the same period of only thirty-five per cent. It is to be noted that eleven of the twelve chosen articles are produced by farmers, ranchers, timber men, and oil workers. These groups of workers are not organized into unions, and yet the commodities they produced show a price rise seventy per cent greater than that of average goods. Organized labor exactions evidently do not account for this great rise in eleven staples.

The last general Federal report on wages was published in 1908 and covered wages for 1907 and preceding years. This report covered 350,758 workmen, including highly organized groups such as the building trades

(45,537), the marble and stone workers (5,316), the printers (14,461), and the foundrymen and machinists (27,612). It included also 28,179 municipal workmen. This representative wage study showed that the average full time weekly wages of these 350,758 workmen were, in 1907, 22.4 per cent higher than the wages for similar work had been on the average for the period 1890-1899.

The report showed also that the average working hours per week had decreased five per cent between 1890-1899 and 1907. Allowing for this decrease in the weekly hours, it appears that average hourly wage increase was 28.8 per cent. But the staples above cited had by 1907 increased over fifty per cent in price above their prices in the nineties. If trade union activity was the sole cause of the average rise in wage of 22.4 per cent weekly for this entire great representative body of workmen, it would be difficult to see any close causal connection between a 22.4 per cent rise in wages and a fifty per cent rise in prices.

But the average wholesale price rise, up to 1907, of all the more than 250 commodities, was only about thirty per cent and the wage study revealed an average rise in *hourly* wages

of 28.8 per cent. This appears, perhaps, a startlingly close agreement between wage rise and price rise and may seem to lend color of truth to the proposition that forced wage rise largely explains price rise.

Three things, though, need here to be kept in mind. First, and very important to this argument, that wage cost is seldom more than fifty per cent of the whole cost of producing any article and that in most manufacturing cases it is less than thirty per cent, dropping frequently below twenty per cent and, in a number of industries, even below five per cent.

The United States Census of 1910, in reporting on expenses of production, lists manufacturing industries under forty-four classes. Of the total reported expenses of production wages constitute above forty per cent in only two of these classes, above thirty per cent in only four, above twenty per cent in nineteen, below ten per cent in twelve, and below five per cent in nine. Of the whole forty-four classes, fifteen, including the great textile, clothing and foundry and machine shops classes, list wages as between twenty per cent and thirty per cent of the full reported expenses of production. The nine classes show-

ing wages as less than five per cent of total reported expenses of production are by no means unimportant classes. They include butter, cheese and condensed milk industries; slaughtering and meat packing; flour and grist mills; lead and copper smelting and refining; petroleum refining and cane sugar refining.

For all these forty-four classes of manufacturing industries of the continental United States, the average wage expense is 18.6 per cent of the total reported expenses of production.

The census figures do not include interest and depreciation items in reported expenses of production. If such items had been secured they would obviously have made the above percentages of wage expenses still smaller.

This one set of facts materially weakens the claim that rising wages are an important item in explaining rises of prices. For examples: First, since wages are shown to be only three and nine-tenths per cent of the reported expense of production in the slaughtering and meat packing industry, if wages in that industry in 1909 had been even double what they were, the expense of production would have been increased less than four per cent. Second,

a further rise of twenty-five per cent in wages paid in the boot and shoe industry, in which wages were reported as 20.6 per cent of total production expenses, would mean an increase of little more than five per cent in the total expenses of producing boots and shoes. Third, to use the general figures for illustrative application, since the census reports that the manufacturing industries of the country taken as a whole show wages to be only 18.6 per cent of the total reported expenses of production, then an average rise, since the nineties, of even forty per cent in wages, would mean, in manufactures, an increase of less than eight per cent in expenses of production. The average rise of full time weekly wages that has occurred since the nineties is probably appreciably less than forty per cent.* Therefore, if even the full wage rise that has occurred is chargeable to the activity of labor organizations, such activity would be chargeable with not more than an eight per cent rise in the expenses of production in manufacturing lines. It must be noted that these figures are the reported figures for manufactures only. The wages undoubtedly average a higher per cent of the cost of production in the extractive industries.

* See Chapter V, p. 105.

The second thing to be kept in mind, in this connection, is that the assumption that aggressive trade union activity is to be accepted as the cause of wage rise even among union laborers is seriously open to question. For example, the 5,463 boot and shoe workers, listed in the Bureau study, had received an average weekly rise of 24.3 per cent in wages (nearly two per cent more than the average rise for all the workers studied), and yet the Boot and Shoemakers' Union had been notably inactive and ineffective in changing the wages and hours of its members.

A third fact should be noted which seems to challenge the proposition that trade union activity is an important factor in the rise of prices. The census of 1910 gave the total population of the United States, exclusive of outlying possessions, as 91,972,266 persons and it listed 38,167,336 of these as "gainful workers." Granting that the American Federation of Labor has some more than 2,000,000 members, and making generous allowance for the membership of the unions which are not affiliated with the Federation, the total number of organized laborers in the United States must be less than 3,000,000. Organized labor, then, includes in its ranks less than one in

every twelve of the gainful workers of the country. Is it reasonable that less than 3,000,000 workers in the United States, even by the most strenuous, unanimous, and successful effort, can cause average wage rise for the whole 38,000,000 gainful workers? Is it reasonable, even though the less than 3,000,000 organized unionists unanimously and deliberately restricted their own output (and this is very far from being the fact) that such action on their part would have any appreciable effect in raising the prices of the products of the entire 38,000,000 gainful workers of the country, especially in view of the fact that wage cost averages considerably less than forty per cent of the total cost of production of all products?

Some of the most highly organized craft unions do succeed in exercising monopoly power, securing thereby high wages and short hours for their members. A good illustration of this may be taken from the 1907 Bureau wage report, cited above. The average hourly wage rise for the whole 350,000 workmen, there studied, was shown to be 28.8 per cent, while the average hourly wage rise of the 45,537 members of the powerful unions in the building trades was forty-seven per cent. Such

monopoly successes doubtless add to the cost of building and thus increase the shelter cost of living. But these monopoly successes of the few powerful unions are not fairly representative of the successes of all unions. To a considerable extent they are achieved at the expense of unorganized gainful workers and of those in the more open unions, and it is therefore doubtful whether even very successful wage activity of the more monopolistic unions causes any rise at all in the general wage level.

Such considerations as these make it manifestly unconvincing to assert that the general rise of prices, in the wide range of goods, is due primarily, or even appreciably, to the activity of labor unions.

6. Excessive Transportation Rates

It is sometimes alleged that high railway freight rates explain rising cost of living in the United States. Taking into account all kinds of freight traffic, the facts seem to make it clear that this charge against the railways does not hold. Reducing freight receipts to the average amount received per ton of freight carried one mile, this table results:

**AVERAGE FREIGHT RECEIPTS PER TON MILE IN THE
UNITED STATES**

Year Average	<i>Receipts in Cents per Ton Mile</i>	<i>Receipts in Cents Year per Ton Mile</i>
1890 to 1899	.8402	1904 .780
1896	.806	1905 .766
1897	.798	1906 .748
1898	.753	1907 .759
1899	.724	1908 .754
1900	.729	1909 .763
1901	.750	1910 .753
1902	.757	1911 .757
1903	.763	1912 .744

From this table it is seen that the average ton mile freight receipt of United States railways was in 1912, .744 cents. This was lower than the average receipt per ton mile in any year since 1890, excepting only the years 1899 and 1900. The 1912 figure was less than three and one-half per cent higher than the figure for the lowest year, 1899, and it was nearly eleven and one-half per cent lower than the average receipt per ton mile during the decade from 1890 to 1899 inclusive. That is, the railways carried all of their freight in 1912 at a charge averaging, for each ton carried a mile, eleven and one-half per cent less than they were receiving in the nineties while general commodity was selling wholesale for

nearly thirty-four per cent more, in 1912, than during the nineties.

Even if railway freight charges had considerably advanced during this rising price period, the effect upon general wholesale or retail prices would be very slight. Detailed studies of the marketing costs for such items as butter and cheese, produced in Minnesota and marketed in New York City, show that the charges for transportation from Minnesota to New York City average from four to seven per cent only of the retail prices of these goods in the New York City market. For a wide range of finer manufactured goods, the freight charges for the same haul averaged less than one per cent of the price to the final consumer.

Particular railway rates may have bearing in raising the prices of particular commodities in particular markets, but when the facts are assembled in the large, the railway charges per ton mile have lowered slowly, but steadily, since 1890, and railway charges are, in general, a very small fraction of the final price of goods.

7. High Protective Tariff

Is there justification for the widely preached doctrine that the high protective tariff has

caused the rising prices in the United States?

A high protective tariff accounts for a somewhat higher level of prices, for many of the protected articles, than would obtain if the duties were lower or were altogether removed. But this is far from saying that the high duties under the Dingley and the Payne-Aldrich revenue acts account for the fairly steady price rise of the last eighteen years.

Those who claim that the tariff is the cause of generally rising prices are confronted with such facts as these, difficult to harmonize with their theory:

(a)—Great Britain has no protective duties, yet British prices have risen generally during this same period of eighteen years.

(b)—The United States sat in the shadow of the Civil War, speaking in tariff terms, until the fall of 1913. During all that period the protective duties were high and many. The middle nineties, under the ill-starred Wilson act, were hardly an exception, and certainly, apart from the three years of that act's life, high protection was the deliberate and cherished policy of the United States from the middle seventies until the Underwood-Simmons act became law. Yet from 1876 down

to 1896 the tendency of general prices was downward!

(c)—Some of the great rises have occurred in the prices of such articles as wheat, oats, and rye, only nominally protected, and lumber where the two dollars per thousand feet was a very low rate.

(d)—Commodity prices varied widely while tariff rates remained substantially uniform. Thus, some items of lumber rose in price nearly one hundred per cent while the tariff rates stood still or were reduced. Wheat, during a decade of protection, ranged from a yearly average price of only .5587 per bushel, in 1894, to 1904's average price of \$1.039 per bushel. It bids fair, this year of 1915, primarily owing to the wholly abnormal war conditions, to set the high average gold price of all of its history, although it is now altogether free from any duty!

High protective duties doubtless cause American consumers to pay higher rates for many protected goods than they would have to pay if the duties were lowered or abolished; but this differential would remain whether the general level of prices were high or low. That is, American consumers probably had to pay

somewhat higher prices in 1898, 1899, and 1900 for many protected goods than they would have had to pay with the duties abolished and yet the general price level was very low in those years.

There is nothing whatever to show that American consumers had to pay any higher price differentials because of protective duties in 1905, 1906 and 1907 than in 1898, 1899 and 1900 and yet the general price level in 1905-1907 was something like thirty per cent higher than in 1898-1900. The rates of duty were precisely the same for both periods. High protectionism, all of the time the high protection remains, accounts for somewhat higher prices for certain articles which are effectively protected. It appears to fail altogether to account for the thing men the world over are now trying to explain, namely, the steady rise in the general price level through a long period of years.

8. The Trusts

The tariff system is sometimes thought to be responsible indirectly for the rise of prices because it has fostered trusts. The argument is that back of the tariff walls were rich opportunities for domestic manufacturers. Many

firms sought the profits of this lucrative field. To avoid the heavy producers' loss in the bitter competition which followed, great industrial combinations were formed. But once these approximate national monopolies were formed, they were able to take full advantage of the tariff protection. The only safeguard the home consumer had had against excessive prices, because of the tariff barriers, was genuine competition between domestic producers. Such competition removed, the resultant domestic monopoly could, if it desired, add the full tariff differential in making up its domestic price list. It might even deliberately load fixed charges upon home consumers and sell goods abroad at much cheaper rates. The tariff, then, is said both to hasten the formation of trusts and to make possible, and therefore actual, excessive price levies by them. This is said, but is it true? Have the great industrial combinations raised their prices out of all proportion to the general rise in prices? Are prices higher under trust control than they would be if there were no trusts?

Perhaps to the man in the street the answer to any of these questions is a pat one. Has not the American eagle been consistently screaming at the trusts for twenty-five years?

Would any sane American presume to accuse a trust of doing any good? Of course trusts are pushing up the prices. All of them are doing it and doing it everywhere, and they drive prices as high as they possibly can. Why, what does any one suppose a trust is? Does anyone mistake it for an organized public philanthropy? Did it not labor to achieve its monopoly power exactly that it should make the ultimate consumer pay all the traffic will bear? Our interrogating friend scarcely tarries for answers, his Socratic case against the trusts seems to him so obvious. The one question he appears never to ask is the scientific one—What are the facts?

It seems to be fairly clear that trusts are cost cheapeners. In his study of trust prices made for the Industrial Commission, Professor Jeremiah W. Jenks detailed the price histories of the so-called Oil, Whisky, Tin Plate, Sugar, Steel, and Wire Trusts. This study showed that trusts have increased the profit margin above that which did obtain and which probably would obtain now under competitive production. But the increased profit margins were probably fully accounted for and more by the cheapened costs under nationally centralized control of production. Actual prices

might even be lower than under competition and the trust still get a larger profit differential.

Price records do not seem to sustain the popular belief that trusts have arbitrarily and ruthlessly used their whole price-raising power to extort further gains than those effected by their cost-cheapening. No four among the great trusts of the country have been more persistently pilloried in the high prices guessing contest than the so-called Sugar, Beef, Oil, and Steel Trusts. Our man of the street who is ready to bombard anyone with long strings of such hard questions as are attributed to him above, will fairly purple with rage at the mere mention of this quartet of octopi.

In its tables of the American wholesale prices of over 250 commodities, the Federal Bureau of Labor Statistics includes prices of sugar, beef, oil, and steel. Its last publication, cited in Chapter I, covers such prices from 1890 to 1913 inclusive.

Granulated sugar is one of the very few articles in the whole list which sold in the year 1913 actually more cheaply than it sold on the average for the base decade 1890-99. Its relative figure for 1913 was 90.4; *i. e.*, it was ten per cent *cheaper* in 1913 than it had been during the nineties. Eight of the thirteen

years since 1900, the relative figure for this sugar has been above its average price for the nineties, but at the highest, in 1911, it was only 112.8. These figures should be contrasted with the figures for all commodities in the table, the figures which represent the trend of general prices. For 1913 this figure was 135.2. In 1911 it was 129.2. That is to say, in 1913, when *general commodity was wholesaling 35.2 per cent higher* in price than during the nineties, *sugar was wholesaling nearly ten per cent lower*, and in 1911, when sugar touched its highest annual average during the whole period of rising prices, it was less than thirteen per cent above its average wholesale price in the nineties although general commodity was over twenty-nine per cent above its average price for the nineties.

Again, during five of the years since 1900, granulated sugar's wholesale price has averaged *less* than it did for the nineties, reaching its lowest point in 1913 at nearly ten per cent below. On the other hand, the average wholesale price of the whole 252 commodities has remained well above the average of the nineties every year since 1900, its lowest record, 108.5, coming at the very first year of the period, 1901, and with an almost steady

rise, its record mounting to 115.9 in 1905, 131.6 in 1910, and reaching zenith at 135.2 in the very last year of this rising price era, 1913.

In 1908 the Federal labor experts published the retail prices of thirty principal food articles. In this list coffee, prunes, and sugar (epitomizing memorable college boarding-house menus) were the three notable exceptions out of the thirty. These were even cheaper in 1907 than they had been in the nineties, while all the twenty-seven others, over half of them free from trust control, had risen from four and five-tenths per cent to fifty-seven and three-tenths per cent and averaged twenty-one per cent higher in price than in the nineties. So also with the late Federal reports on retail prices cited in the first chapter. Of the fifteen common food articles there listed,* granulated sugar, alone, in December, 1913, was cheaper than it had been in the nineties, cheaper by five and nine-tenths per cent. All fourteen other listed foods were much higher, ranging from the 26.1 per cent rise in wheat to the 150.2 per cent rise of eggs. Clearly, the facts

* Note that the table in Chapter I, p. 4, gives the average prices for the entire year 1913, while the above figures are for a definite date, December 15, 1913.

exonerate the Sugar Trust from a charge of forced high prices.

The price returns for fresh beef and hams in the Federal report on wholesale prices, seem, at first and isolated view, to justify the charge that this trust has forced prices upward. In 1913 fresh beef wholesaled at 162.4 and smoked hams at 168.9 as compared with 100, in each case, for the nineties. In contrast with the averaged figure for all commodities in 1913, 135.2, these beef and ham prices show nearly double the rise. When, however, the patient searcher for essential facts turns back a few pages in the same report, he may be surprised to learn that "steers, choice to prime" are recorded for 1913 at 167.8 and "steers, good to choice" at 179.7, while "hogs, heavy" are recorded at 189.6 and "hogs, light" at 191.2.

The *prima facie* price case against this beef trust, which seemed so clear when meat prices alone were considered, is not only destroyed, but to an appreciable degree it is reversed, when the live stock figures are coordinated with the meat figures. A business concern seems fairly free from the guilt of price extortion, even though it be charging 62.4 per cent higher prices for a product, when it is

compelled to pay from 67.8 per cent to 79.7 per cent more to secure the raw material for this product, or in the second case, even though it be charging 68.9 per cent more for a product, when it is compelled to pay from 89.6 per cent to 91.2 per cent more for the raw material of this second product.

Correlating crude and refined oil prices gives a case similar to that for beef prices, similar but still more favorable to the trust. Water-white refined petroleum is recorded as selling wholesale, in 1913, on the average 38.5 per cent higher than in the nineties, or at a price advance slightly greater than that for general commodity 35.2 per cent. But crude petroleum, raw material for this refined product, averaged, wholesale, 169.2 per cent higher in 1913 than in the nineties, that is, in actual dollars and cents, it was selling for an average of \$2.45 per barrel in 1913, whereas its average price for 1890-1899 was only ninety-one cents per barrel.

The Steel Trust has not varied its listed price for steel rails, \$28 per ton, since the formation of the trust in 1901. As samples of other products it controlled, in 1913, steel sheets, black, Number Twenty-seven, listed on the average at 97.8, steel billets at 119.8, cut

nails at 96.9, wire nails at 84.1, and barbed wire at 91.4. And it is noteworthy, too, that even in the case of steel billets, where the price in 1913 is recorded as 19.8 per cent higher than in the nineties on the average, the prices in 1899 and in 1900, the years immediately before the forming of this trust, are recorded as averaging respectively 44.6 per cent and 16.4 per cent higher than the nineties' averages. Similar comparisons made on the other items accentuate the relatively low prices of steel trust product in the year 1913, the year of highest averaged prices for all commodities. For example, steel rails listed at an average of \$32.2875 per ton the year before the trust was formed and are therefore selling about thirteen per cent cheaper in 1913 and under this trust's control than they were selling before the trust was formed, and black steel sheets recorded at 97.8 in 1913 are recorded at 130.8 for 1900.

When it is kept in mind that these four great business organizations are compelled to pay higher prices for their raw material, higher wages and higher taxes than they had to pay in the nineties, these price returns, in two of the four cases actually lower for 1913 than for the nineties, seem to be remarkably

the reverse of the popular belief. Surely there is nothing here recorded which indicates that the trusts are responsible for the general price rise.

This conclusion, sustained by the price records, is by no means a justification of the level of prices maintained by trusts. It affirms merely that the trusts have not played an important role in the drama of the rising cost of living. The essential trust problem, from the viewpoint of the consumer, is that of compelling or of inducing the trusts more liberally to share with the public the cost-saving gains of industrial combination. There has been, thus far, probably very little of such sharing; the trusts have retained for themselves most of their considerable cost-saving gains. But it appears that they have not, in addition, arbitrarily advanced their prices more rapidly than general prices have advanced throughout the country.

There are occasional instances of exorbitant price levies by local consolidations, such as the so-called Milk Trust and Ice Trust of New York City. Such organizations sometimes have taken murderous toll of the city's poor. They are, however, strictly local combinations. However exorbitant their forced price rises

may be, the effects upon the general price, even of their own kind of commodities, the country over, are very slight and their effects upon the general price of all commodity, the country over, can be but infinitesimal.

CHAPTER IV

DEMAND CAUSES

THE alleged causes of rising prices which stimulate demand if they are real causes deserve careful consideration.

1. Increasing Population and Immigration

Treating these alleged demand causes in the order suggested at the close of chapter two, the first query is: Does population growth, by native increase or by immigration, so increase demand for goods as to cause rise in prices?

The steady growth of population is one of the remarkable social facts of the world. The few figures here given are representative of population returns wherever records have been kept:

POPULATION GROWTH OF LEADING NATIONS

England and Wales—1801, 8,892,536; 1901, 32,527,843; 1911, 36,070,492.

France—1801, 27,344,003; 1866, 38,067,064; 1911, 39,601,509.

German Empire—1816, 29,831,396; 1900, 56,367,178; 1910, 64,925,993.

Russia—1796, 36,000,000; 1897, 129,209,297; 1911, 167,-003,400.

Italy—1816, 18,383,000; 1901, 32,475,000; 1911, 34,671,-377.

India—1861, 196,000,000; 1901, 231,605,990; 1911, 244,-267,542.

Canada—1801, 240,000; 1901, 5,371,315; 1911, 7,204,838.

United States—1790, 3,929,214; 1900, 75,994,575; 1910, 91,972,266.

With the exception of France, where the population has increased only slightly in the past fifty years, the other leading European states appear to be growing steadily and fairly rapidly. The population of England and Wales and of Russia multiplied by more than four in a little more than a hundred years, and the population of the territory now in the German Empire multiplied by nearly five in less than a century.

Nothing but untrustworthy estimates are at hand for the population of China, but the censuses taken in India since 1861 show that even in the crowded east, subject as it is to the dreaded famines and plagues, the population has increased about twenty-five per cent in half a century.

The most striking increases naturally occur in the new western world and are illustrated in the table by Canada and the United States,

whose populations have multiplied respectively by twenty-nine and twenty-three within the table periods.

The population increase for the last census decade does not suggest any retardation in growth as decades pass. For the few countries listed, the absolute increase of the last decade totaled over 80,000,000. If other lands than those here listed are growing proportionately, then the human family is increasing at the rate of perhaps 200,000,000 a decade. Such great increases naturally suggest the possibility that the world may be getting so densely populated that diminishing returns for given human labor will force rising cost of living.

A little reflection, however, will show that increasing population is not a causal explanation of the recent world price rise, which has continued for less than twenty years. The little State of Rhode Island had only 224,326 people in its largest city in 1910, and only 51,622 in its next largest. While it is essentially a manufacturing state, it still has wild country lands and, along with its sister states, it laments its abandoned farms. It does not appear overcrowded, and yet, if all the continental United States were as densely popu-

lated, the United States would contain a population equal to the present population of the whole world. When the people of Massachusetts, which reported a density of 418.7 people per square mile in 1910, and the people of Rhode Island, with a population density of 508.5, can live in any kind of comfort, it seems premature to attribute serious consequences from population growth of the past two decades to the people of the whole United States, which averaged only 30.9 people to the square mile in 1910, and only thirteen people to the square mile on its western 2,000,000 of square miles. When the people of England and Wales, with a population density of 618 per square mile, and the people of Belgium, with a population density of 652, can live in any kind of comfort, it seems unconvincing to explain the world's rising prices by the population increases of the past twenty years, remembering that the habitable world population density does not average above thirty to the square mile and that whole continents fall far below this; *e.g.*, Australia, density, 2.31; South America, density, 5.10; North America, 13.68, and Africa, density, 14.76.

To put a phase of this argument in another form, the resources of the United States are

yet rich enough so that admitted able-bodied immigrants, once adjusted to the industrial life of the country, are able to produce appreciably more than they consume. This means that every such immigrant aids towards increasing the supply of goods more than he adds to the demand for goods. If present immigration to the United States, then, has any appreciable effect on prices of goods, that effect tends to register lower prices and not higher prices for those goods.

2. Speculation

Speculation is sometimes cited as a cause of rising prices. The type of speculation in mind is the Wall-Street, Chicago-Pit variety. In the sensational strife between those who try to corner the market and their opponents, tens of thousands of shares, or hundreds of thousands of bushels, are bought and sold recklessly. The steady buying of the one seeking a corner drives the price of wheat up and up until every newspaper in the land is headlining the pit operations and is commenting upon the dwindling size of the poor man's loaf or its rising price. Yet notable commodity corners come seldom. If at all successful, their success is due to prevision on the part of the corner

builder and not to the fact that the corner building has had anything at all to do with the actual supply and demand of the commodity, when an entire market year is considered.

A successful corner in a commodity operates much as cold storage. It distributes the supply somewhat differently through the year, but it in no way decreases the supply for that year. It may withhold from the millers, during the corner-producing fight, some wheat which would otherwise have been ground by them during that time, but on the other hand, when the corner fight ends, whether in the success or in failure of the corner, the withheld wheat must then be marketed. This necessitates an increase of the wheat supply in the months immediately after the corner ends, above what that supply for those months would have been, and such increase will be exactly equal to the amount of wheat which had been withheld by the operators from regular channels of wheat consumption during the weeks or months in which cornering operations went on. That is, the artificial demand created by a corner is temporary. Historic instances of successful corners in wheat clearly show this.

The famous corner achieved by "Old Hutch," in September, 1888, drove the price

of wheat to two dollars a bushel. But the price fell to \$1.04½ on the day after the fight ended. Again, in 1898, young Joseph Leiter made his Napoleonic débüt in the Chicago pit by engineering a successful wheat corner and compelling settlement by his opponents, in May, at \$1.85 per bushel. Yet the average price of wheat for the year 1898 was 88½ cents a bushel. That the cornerer is subject to the supply and not the supply to the cornerer is well illustrated by the financial burial of this same Joseph Leiter under the avalanche of yellow wheat harvested within three months after he had won his millions and his Napoleonic trappings in the May corner. Attempting a second corner by the same methods and with all the increased financial strength and prestige won by his May success, he failed abjectly, lost far more than he had won in May, and all because he had not learned that even the great Bonapartes of the pit are subjects, not lords of supply. Speculative corners come so infrequently, and are so temporary when they do come, that their effects on general rising prices over a long period are wholly negligible.

Another type of speculation is the gambling promoter's type, which expresses itself in

watered stocks. It makes its winnings by unloading the shares of highly overcapitalized corporations upon the common garden variety of confiding investors found so plentifully in kitchens and in college faculties. The whole gamut runs from lucky-dime oil wells, Eldorado gold mines, sure-thing rubber plantations and 520 per cent Miller syndicates up to extravagant capitalization of the elusive "good-will" factor in otherwise reasonably respectable industrial and public service corporations and indefensible expansions of the bonded obligations of railways. Such devices have undoubtedly separated many perfectly and pathetically innocent investors from hard earned savings. They have enabled some prowling confidence men of the corporation world to live regally without other effort than that involved in concocting and mailing to addresses on lengthy "sucker lists" prospectuses worthy of Barnum, and follow-up letters, overflowing with confiding personalities and winning benevolence.

Indirectly this type of speculation has probably had some upward effect upon prices by dissipating, in gambler expenditures, funds which were intended by the innocent investors to be added to the permanent, effective capital

of the country. Had the effective capital been so increased, the producing world would be offering a larger volume of products than it is now offering and prices would tend to be lower. But the naïve argument sometimes offered, which concludes that overcapitalization accounts for the whole rising price situation, claims a direct effect and seems to rest on a pure assumption. That assumption is that promoters having largely overcapitalized their enterprises, proceed therefore to charge enough higher prices for their goods so that they may be able to pay dividends on their over issued stocks. In other words, it is assumed that a producer can dispose of his whole product at any price which he chooses to set. This assumption is so contrary to all fact that it probably deserves only mention. The wide range of industrial and rail securities which pay little or no dividends is factual proof that the assumption is untenable. If all a corporation had to do to get a price for its goods was to ask it, why should it waste any of its time increasing its stock issues?

There can be no doubt that the United States has been harmed much and in many ways, by the bogus flotations and lying promotions of its history, but the price effects of

such bandit successes are indirect at the most, and much less important than they appear to some alleged foes of "the system." Furthermore, it is worthy of note that precisely during this last fifteen or eighteen years of steadily-rising general prices, the investing public has been unusually wary, the law has been made more severe and has been invoked more freely and successfully against fraudulent schemes and the big-business world itself has been awakened more generally to admire serviceableness and accomplishment rather than mere shrewdness and acquisitive success. We are passing from a generation of exploiters and wreckers into a generation of cooperators and builders within this very price-rising period.

Neither on the side of spectacular corners nor on the side of gambling expansion of corporate securities does speculation appear to be an appreciable cause of the steady rise of general price.

3. Extravagance

Extravagance, individual and social, characterizes modern life.

A.—The rapid building of great American fortunes has developed an ugly and disgusting

type nicknamed the "spenders." They squander more or less questionably-acquired fortunes in peacock efforts to outshine their neighbors and to dazzle honest folk, who are compelled to practice economy because they must first earn before they spend. Perhaps it is another indication of the probable truth of the evolutionary story in its baldest form, that all down through the economic ranks can be found the aping, covetous admirers of the spenders. The ten-dollar-a-week apprentice, who spends a month's income in "blowing" his whole crowd at his club's annual ball, belongs to the "hall-room boys" type of persons found sprinkled in all the lower economic levels. These are spenders, humble, but none the less extravagant.

Extravagance is a relative thing. It is living fully up to or beyond one's income, provided that income is sufficient to permit of any rational saving, or it is the spending of considerable parts of one's annual income in silly, ostentatious, sensual, harmful ways. In the second form it may be seen not infrequently when incomes are very low. It is gross extravagance for a man drunkenly to part with half of his week's wages at the tavern, when his children are hungry and his wife is ill-clad,

and all the more so if, when all his wage is carefully spent, it will provide necessities only for his family group.

The fads of fashion and the use of perishable stuffs in place of solid heirloom fabrics of the olden days are forms of commingled individual and social extravagance. Nothing could be more unintelligent than to follow the dictating of fashion makers, designing persons in a double sense. And yet, follow, the crowd does. The "spenders" are on the heels of the modiste and a large part of the community is in close trail. Simon says "Pancakes" and who would be seen in any but a flat, narrow-brimmed hat! A few months later Simon says "Sombreros" and within a few days all pancakes are in the garret and everyone's hat flops a brim the width of the church aisle. At the opening of the next season Simon's ukase orders "Turret and Spikes" and the sombreros join the pancakes. And so it goes, all quite regardless of the serviceability or the convenience or the beauty of the hat. "One might as well be dead as out of fashion" is the justification given, and just because so many people are so sheeplike that even their justification has to be bromidic, the fashion makers, who in recent years have surely been

the Cubists of Clothing, continue to concrete their nightmares into straws, felts, worsteds, and silks, and to order humanity ceaselessly to act the window wax model. One of the reasons, doubtless, why the shoddy substitutes for genuine goods find ready sale is that the buyer thinks they and their surface sheen will last at least as long as the fashion. There were shiftings of fashions in olden days, but not nearly the same proportion of the population could follow even if they would. Swift fashion change, with its close corollary of flimsy fabrics, dictates today a form of extravagance which both increases cost of living and atrophies intelligence and taste.

Extravagance expresses itself, particularly in America, in letting the palate prevail rather than the brain, in determining the selection and preparation of foods. It expresses itself in the contents of the garbage can, to which many families discard, weekly, enough "odds and ends" to provide a meal or two of palatable and nourishing food, if intelligent thrift but utilized them. And here again, while such waste is sometimes ostentatiously ordered on a sweeping scale by top layer "spenders," it is not infrequent also among families of small incomes.

B.—Space permits mention, only, of striking American forms of social extravagance:

(1)—Tolerance of carelessly made, combustible buildings, enormously inflating the annual fire loss of the United States—a loss passing the \$300,000,000 mark in these years.

(2)—Negligence of industrial conditions and inert retention of outworn legal formulas, thereby making society blameworthy for the preventable one-quarter to one-half of the awful number of deaths and accidents charged to our American industry each year—35,000 deaths and 500,000 cases of accidental injury, one full army corps slain and twelve full army corps wounded, in America's industrial warfare each year.

(3)—The careless individual and community disregard of health and its necessary conditions, perhaps doubling the estimated annual 2,000,000 cases of inevitable sickness, greatly prolonging many such cases and causing tens of thousands of premature deaths annually.

(4)—The failure to deal scientifically with the conservation of effective human beings, involved in possible prevention of criminality, pauperism, and unemployment.

(5)—The failure best to conserve the publicly and privately owned resources of the nation—land, forests, minerals, fisheries, and water rights.

(6)—The disproportionate cost of national armies and navies, more marked in Europe than in the United States, but most watchfully to be held in check here, where already war charges, past, present, and future, consume annually seventy per cent of the Federal income.

(7)—The high cost, direct and indirect, of government, Federal, State, and Local, through the lost motion, novice inefficiency, frequent and radical changes of policy, and the pettifogging feudalism so common in a political system where getting elected and re-elected, if possible, and defending the administration, oftentimes seems to be the public official's chief business.

However, Americans have not grown extravagant in a day, either individually or collectively. The general social inventory in process during the past decade is revealing extravagance long practiced, and is causing some of the social extravagances outlined above to be appreciably checked, for the first time. Un-

questionably, America would be better off today had it always frugally husbanded its natural and human resources and its capital, but evidence does not appear which shows that even America's serious extravagances and wastes are an important cause of the rising general price of recent years. Prices fell generally in the United States from the middle seventies to the middle nineties, and yet some of the worst of its historical extravagances occurred in that period, and again prices are rising the world over today, where peoples are spendthrift and where they are frugal. Unusual national extravagance may fairly list as a differential cause—a factor in explanation of the higher rise of prices in one country than in another, but it does not appear to be a basic explanation of the general rise in world prices during just this last twenty years.

4. Rising Standard of Living

Clearly distinguishable from extravagances individual and social, are increasing expenditures due to rising standards of living. These are added expenditures, rationally made to secure the comfort and well-being, to promote the health and happiness, to increase the efficiency and the culture, and to ennoble the whole

life of the individual, the family group, or the community. To secure finer and more varied foods, more spacious and more beautiful dwelling places, with better light, air and view, more varied garments of better fabric and better make, better and more extended opportunities for education, vocational and cultural, and for recreation, ampler provision for care of the health and for insurance safeguards against inroad of the living standards through sickness, accident, old age or death, freer social interchange with friends and fuller participation in the community life—civic, educational, recreational, or religious—to secure such things as these, increasingly, is to make life more and more worth living. The family group, thus advancing in the worthier life, needs more and better things and opportunities and it thus increases the demand for more and better things. Definitely rising living standards increase the cost of living, other things all remaining the same.

The first question that occurs with reference to rising living standards when considered in relation to the problem of rising living cost is, would not the productiveness of a people rise much in proportion to their rising standards? If so, then there would be no relation com-

pelling rising price. This is simply another form of the idea that there is true economy in high wages. High wages paid to individual workmen by no means result in high labor cost per unit of product.

When that construction company paid the American bricklayers \$4.80 per day, in gold, to lay brick alongside Cuban masons on that Havana building some years ago, the spectator might have been perplexed to understand how the contractors could afford to pay the American masons so much when they were paying the Cubans only \$1.75 per day, and that in slightly depreciated silver. His perplexity would disappear when he learned that the Americans were laying 1,800 bricks a day and the Cubans but 500. He would then note that it actually cost only \$2.75 to have the Americans lay 1,000 bricks, whereas it cost \$3.50 to have Cubans lay 1,000 bricks. The American masons, by their greater productivity, more than counterbalanced their higher dollar and cent wage. Even so, the generally rising standard of living should increase the productiveness of a whole people if anything more than in proportion to the increased things demanded to satisfy the rising standard. It should, therefore, not cause rising prices. This

conclusion applies particularly in a land having as rich resources as has the United States.

The second query that occurs with reference to rising living standards, considered as a possible cause of recently rising general prices is: Is there any tangible proof that living standards have been rising any more rapidly in the United States or in the world at large, during the past twenty years than they were rising during the preceding twenty years? That is, the same query rises here which arises in connection with consideration of the retailing system, of the tariff, of increasing population, and of extravagance, namely, if this is an important cause of rising price, then why did prices not rise from 1875 to 1896, as well as from 1896 to 1915?

Living standards surely rose in the United States from 1875 to 1896. That was the double decade which ended the pioneering hardships and peopled practically the last of the desirable arable free public land. That was the double decade which equipped the farmers of the country with a whole range of labor-saving, cost-cheapening agricultural implements. That was the double decade which expanded the use of the telegraph and introduced the incandescent light, the tele-

phone, the bicycle, the automobile, and the refrigerator car. That was the double decade which opened with the great Centennial Exposition that proved to the world that America had marvelously recovered from the industrial derangements of the Civil War time. That was the double decade which saw the great organizations of labor, the Knights of Labor and the American Federation of Labor, develop high power, expressive of the rising standards of American laborers.

Surely that double decade which saw the public school system of the country widely extended, which changed from the iron to the steel rail, which greatly enlarged and perfected the whole railway system, which reaped the early fruits of the great Mississippi Valley and the cattle grazing plains—surely such a double decade was one of rising living standards in the United States. Yet, during that double decade from 1875 to 1896, the general tendency of prices was steadily downward.

If the general effect of a distinctly rising standard of living is to increase the productiveness of a people even more rapidly than the standard rises and, therefore, the general effect is toward lowering of prices, then the rising standard in America from 1875 to 1896

was probably cooperating with some other factors to cause the lowering of prices which actually did occur in that period. If that is correct analysis, then the rising standards of the years since 1896 must also have tended towards lowering of prices. But general prices have actually and steadily and considerably risen during this recent period. Therefore some causes of generally rising prices must be powerful enough not only to cause the rise which has occurred, but also to overcome the distinct tendency downward due to the increasing population and the rising living standards.

Our analysis thus far has left us one cause only which clearly makes for rising prices, and that is, the disappearance of the richest national resources. But the increasing population and the rising living standards seem probably both of them to be working against this one cause of rising prices. We evidently have not reached a satisfactory cause, adequate to explain this general, steady world-wide rise in prices, but we have at least come to see what we must find if we do find an adequate cause. It must be a cause which operates throughout the commercial world. It must be a cause which has operated steadily for some eighteen or twenty years at least. It must be a powerful

cause, for aided only by relative exhaustion of resources and opposed by increasing population and rising living standards, it must explain an average wholesale price rise in the United States of over fifty per cent from 1896 to 1914. And it must be a cause the effects of which can be factually harmonized with a steady tendency downward of general prices from 1875 to 1896 as well as with a steady tendency upward of general prices since 1896. Our analysis up to the present has at least surveyed the ground for us, and has shown us what tests our adequate cause must meet.

5. Increased Gold Supply

Only one alleged cause remains to be considered—the increased gold supply. The steady and great increase in the world's annual gold product is one of the marked things in the world of industry during the past twenty years. A table summarizing the world's gold production since the discovery of America follows:

WORLD GOLD PRODUCTION SINCE 1492

Years	Gold in Dollars	Years	Gold in Dollars
1492-1600	\$ 501,640,000	1899	\$306,724,100
1601-1800	1,869,120,000	1900	254,576,300
1801-1830	288,694,000	1901	260,992,900

<i>Years</i>	<i>Gold in Dollars</i>	<i>Years</i>	<i>Gold in Dollars</i>
1831-1840	134,841,000	1902	296,737,600
1841-1850	363,928,000	1903	327,702,700
1851-1860	1,332,981,000	1904	347,377,200
1861-1870	1,263,015,000	1905	380,288,700
1871-1880	1,150,814,000	1906	402,503,000
1881-1890	1,059,892,000	1907	412,966,600
1891	130,650,000	1908	442,476,900
1892	146,651,500	1909	454,059,100
1893	157,494,800	1910	455,259,800
1894	181,175,600	1911	461,542,100
1895	198,763,600	1912	466,136,100
1897	236,073,700	1913	455,000,000
1898	286,879,700		

As broader comparisons from this table, note that in each of the past five years the world has produced nearly as much as it produced in the entire century 1500 to 1600 and that the combined gold product of the last five years nearly equals the total product of three centuries after 1500; again, production for any single year since 1904 is greater than the production of any of the first five decades of the nineteenth century; last of the broader comparisons, note that the product of three years now surpasses the product even of that wonder gold decade 1851-1860, when the new Californian and Australian fields were pouring out their gold, and that, if the world gold production for the years 1914 and 1915 equals that for 1912 and 1913, the twenty-six years since

1889 will have produced more gold than the four hundred preceding years produced.

For the purposes of the argument in this book, especial attention should be given to the production since 1870. The 1870-1880 decade produced less than the preceding decade and the 1880-1890 decade product declined still more. In the early nineties the world annual gold product began to rise. 1892 was the first year, since 1860, to surpass 1860 in output. From 1892 until 1912, excepting only 1900 to 1902, there is a steady annual increase, never less than \$1,000,000 and mounting as high as \$50,000,000 between 1897 and 1898. The excepted years, 1900-1902, were the years when war interrupted the production of the South African gold fields. The drop of \$11,000,000 from 1912 to 1913 may have been due to labor troubles (the Transvaal, owing to a miners' strike, fell \$5,000,000 behind its previous year's record), or it may mean that the year 1912 is to be registered as the world's climax year in this era of huge gold production.

Gold is used in the arts and for coinage. There is call for it to make jewelry and plate, to head canes and umbrellas, to gild weather-vanes and steeple balls and to supply other craft needs; there is call for it as a durable,

beautiful, portable, and impresible material, out of which to make the primary money of the commercial world. The whole demand for gold is compounded of these two calls.

The coinage demand for gold is determined by two factors, the whole volume of exchanges to be effected and the rapidity with which gold constructively circulates. This rapidity of circulation depends upon the general monetary and financial systems. If much business is done on credit and settlements are widely made in checks and drafts and if, when money is used, much of it is of a convertible type, issued in excess of the primary money reserve held to redeem it, then one dollar of gold may do many dollars' worth of business; if, in a given period, on the other hand, business is largely done directly for cash and there are few substitutes for primary money, then one dollar in gold can do much less business within the given time. That is, if gold itself must directly effect the business settlements, then a dollar of it can do much less business in a given period than if a highly perfected exchange system allows the gold largely to remain in a reserve, to redeem a considerably larger face value amount of representative money instruments.

Every perfection, then, in the exchange system operates to increase the amount of money work which one dollar of gold can do in a given period. The general exchange system is steadily growing more and more efficient, the systems of representative money and of money substitutes such as bank checks, are being steadily perfected and more widely utilized, so that each dollar in gold is being enabled, as the years pass, to do a larger and larger volume of business within a given time.

But, in these recent years of huge annual gold production, more than half, and commonly two-thirds to three-quarters, of all the gold mined each year goes into money service. An estimate for the year 1911 places the total value of gold used in the arts of the world at \$164,272,700, while the new gold product was \$461,542,100. This leaves nearly \$300,000,000 gold to go directly into the primary money reserve of the world.

The amount of money work which can be done, then, through the primary gold money of the world, has been doubly increasing in recent years, because both the rapidity of circulation has been increasing appreciably and the actual volume of gold has been increasing vastly. In effect, it may fairly be said that

the supply of money has been enormously increasing steadily since the early nineties.

But prices, as shown in chapter two, are reached by measuring utilities of other things in terms of the fundamental money thing, gold. And this money thing, gold, was there shown to be a commodity, subject to the general law of commodity value. A large increase in its supply would, other things equal, make a unit of it worth less to men. But, as shown just above, the supply of it for money purposes is practically increasing in a double way—actually, enormous annual increases in the gold itself, and constructively, through speeding up of the machinery of exchange. A doubly strong influence, then, has been at work for the past twenty years to make a unit of gold worth less and less.

The one offset which might prevent any price record of this tendency toward cheaper gold would be a steady increase in the world's volume of exchanges. Obviously, if the world's volume of exchanges—that is, if the number of barrels of flour, pairs of shoes, railway tickets, days of labor, etc., etc., exchanged in the world's inclusive market were increasing fully as rapidly as the ratio of increase of gold money multiplied by the ratio of increase

of the rapidity of its circulation, then the demand for money service would be increasing just as rapidly as the supply of money units, and there would be no reason for any change in the level of general prices. On the other hand, taking into account both the great increase in gold money and the increased efficiency in its use, if the volume of world exchanges has not increased at all, or has not increased so rapidly as has the number of money units offering to effect the exchanges, then the money units will be worth less and less; that is, gold will be cheaper.

If gold is cheaper, that means it takes more of it to get a given amount of other things; but, whenever more of it must be given to get a given amount of other things, this is the same as saying that prices have risen, since a given amount of gold is arbitrarily declared to be the measuring unit (*e. g.*, in the United States, as we have seen, 23.22 grains of pure gold is the dollar unit). To put it in the other way, when we say that the wholesale price of fresh eggs has risen from \$10 to \$20 a crate, we are practically saying that whereas formerly ten times 23.22 grains or 232.2 grains of gold would command a crate of eggs, now it takes twenty times 23.22 grains or 464.4 grains of

gold to get a crate of the same grade of eggs.

The fundamental problem of general change of prices, then, deals with three factors: the number of monetary units and the rapidity with which these units do the work of exchanging, on one side, and the total volume of exchanges to be effected, on the other side. It is in clear evidence that the number of gold money units hugely and steadily increased during the past twenty years. During the same time the general machinery of exchange was greatly improved. Unless the volume of the world's exchanges increased proportionately to the compounding increase of the other factors, then *general prices the commercial world over should have risen*. Here at least, then, we are considering the fundamental elements in price-making. We can see a hypothetical condition which, if it obtained actually, would satisfactorily explain the rising prices of the last twenty years.

The lacking item to make a demonstration fully convincing is an acceptable measuring of the volume of world exchanges. Statisticians have attempted to do this. The most elaborate calculations have been made by Professor Irving Fisher. He has constructed a table in which he assembles, for the United States,

the recorded volume of yearly exchanges of forty-four leading articles in internal commerce, the volume of exports and imports and the amounts of stocks sold. These three he selects as direct indicators of trade volume. In the table he records also the railroad freight tonnage and the pieces of first-class mail matter carried yearly, as indirect indicators of trade volume. Combining the returns of these items, he estimates that trade volume is increasing annually about four and one-half per cent.

On the other hand, accounting that the actual quantity of money in circulation is growing about two and one-half per cent a year, and that each dollar is becoming steadily more effective in doing money work by reason of perfecting and extending exchange machinery, the total money units available to effect exchanges are increasing about seven per cent a year. That is, by this carefully compounded table it is shown that steadily since 1896 the volume of United States business has been increasing appreciably less rapidly than the supply of circulating media of exchange.

These final figures from Professor Fisher's painstaking calculations indicate that taking into account the effects of the increased sup-

ply of money gold, its rapidity of circulation (using this phrase in a very broad sense), and the volume of the business to be done in terms of this circulating gold, the facts indicate that United States general prices should have risen about two and a half per cent a year on the average since 1897. That is to say, this one last cause, the increasing gold supply heightened by perfecting exchange machinery, appears, through its monetary effects, to account for a general price rise of some forty per cent from 1897 to 1913. The actual wholesale price rise for the United States from 1897 to 1913 is, by the Labor Bureau's figures, from 89.7 to 135.2, a rise of 45.5 per cent on the base average, or of 50.07 per cent if the 1897 figures be taken as the base. *The increasing gold supply energized by perfected exchange machinery in its full price effects appears, then, with rough approximation, to account for the general price rise of the past eighteen years in the United States.*

Again, since gold is the basal money of the whole commercial world, this increased gold supply satisfies the searcher after the basic causes of generally rising prices the world over. This cause and this alone, of all the alleged causes analyzed in preceding pages, has clear

world-wide effects making for rising prices everywhere. The ratios of changing business volume and particularly the ratios of improving and extending exchange machinery for increasing the rapidity of circulation of the primary gold monies, vary with different countries and their variation doubtless largely explains the variations in the general price rises in the different nations.

Once more, effects of this increasing gold supply cause harmonize readily with the fact that prices tended steadily downward for the double decade before 1897. A table of the decades of gold production since 1850 will give the leading facts needed to show this harmony:

WORLD'S GOLD PRODUCTION BY DECADES AND ANNUAL AVERAGE PER DECADE

<i>Decades</i>	<i>Decade Gold Production</i>	<i>Annual Gold Prod. per Decade</i>
1851-60	\$1,332,981,000	\$133,298,100
1861-70	1,263,015,000	126,301,500
1871-80	1,150,814,000	115,081,400
1881-90	1,059,892,000	105,989,200
1891-1900	2,101,240,900	210,129,090
1901-1910	3,780,364,500	378,036,450
1911-1913 (3 yrs.)	1,382,678,200	460,892,733

This table shows the steady decrease in the world's average annual gold output from 1860

to 1890. During this time the annual output averaged by decades fell steadily for the thirty years from over \$133,000,000 for the decade closing 1860, to less than \$106,000,000 in the decade closing 1890. During the sixties the Civil War drew hundreds of thousands of men from productive pursuits and thus probably kept the volume of exchanges from increasing so rapidly as it otherwise would have done, and in the middle seventies, the crisis of 1873 and the following depression years again held the exchange need for money lower than it would have been. But reaction came in the late seventies and business developed more evenly until the crash of 1893.

During this period from 1875 to 1893, while the trade volume was expanding with fair rapidity, the annual output of the world's gold was decreasing steadily. Moreover, the general exchange machinery proper changed little during this period. Indeed, the nation put in the whole period in elaborate, unsettled debate about silver and gold standards, with "greenbackers" challenging both sides in the precious-metal controversy. The nation was still largely interested in the border-life new-land problems. It took things more "by and large," laying prophetic lines of railway and

then waiting for the traffic to arrive, and dealing in cattle ranges of thousands of acres rather than in truck farms. It was still newly rich and did not feel compelled to economize. The changed conditions, during the past twenty years, have made the national mind into a culture bed for the microbe of efficiency. And efficiency applied to the exchange system has speeded up the whole process, perfecting it all the way from calculating machines up to the Federal Reserve banking system.

The earlier years, then, from 1875 on to 1893, were years of fairly steady increase in business volume, with a steady decrease in the annual gold product and with few important improvements in the exchange machinery. And this, by our price reasoning, means a period of demand for basic money increasing somewhat more rapidly than the supply of that money was increasing. Gold, therefore, somewhat appreciated; or, the other side of the shield, prices tended to sag.

The increasing gold supply coming at a time when efficiency is the watchword and when, by rapid improvements in the banking and general exchange system, every new gold unit is made to do an expanding amount of business, seems to be the adequate cause of generally

rising prices for the United States and for the world at large. Consideration of this same gold supply cause in relation to the period from 1875 to 1897 harmonizes the conditions as to annually decreasing new gold, then, with the falling prices then, just as clearly as the changed gold conditions since 1897, explain the generally rising prices of the last eighteen years.

Prices have been rising in densely populated Belgium and in sparsely populated Australia, in high protection Germany and in free trade Britain, in many goods free from trust control more rapidly than in goods of leading trusts; more rapidly in the products of unorganized farm workers than in many lines employing highly unionized labor, for outdoor white pine and corn more rapidly than for cold storage eggs, and so on through the list of supply and demand causes we have analyzed; but rising gold supply, through its monetary price effects, is the only cause which operates everywhere, which affects all marketed things, which is powerful enough to force prices up the hillside steadily for a score of years and which, accepted as a leading cause for the climb of prices from 1897 to 1915, can still be consistently applied as explanation of

the previous twenty years of falling world prices.

Other causes, doubtless, operate to explain why this or that commodity has risen far more rapidly or far less rapidly than the average rise for all commodity, but this one cause alone is ample to explain the steady upward trend of prices generally.

The long history of world prices since the discovery of America seems to corroborate this conclusion. In the 16th century, when Spanish galleons brought their cargoes of precious metals from Peru, Bolivia, and Mexico, the European supply of precious metals was greatly increased. Before 1540 the mines of the world were producing annually about \$5,-000,000 worth each of gold and of silver. The richest of the new world mines were developed after 1540 and the annual silver output multiplied by nearly five, the gold output increasing slightly. Prices rose first in Spain, where the new silver and gold first came, and then in other parts of Europe, as trade drew the great new supply of the money metals away from Spain. Is it not confirmation of the argument above to find that European prices rose steadily, more than doubling between 1500 and 1600?

The inpouring of the precious metals has continued since and prices have risen century by century. There have been ups and downs. World prices rose markedly for the double decade after 1849 and 1850, when the Californian and the Australian mines richly poured out their new gold. In the western gold-standard countries, prices gradually and steadily fell from the middle seventies until the middle nineties, a period during which, as shown earlier in this chapter, the annual gold output was steadily decreasing.

Not the least striking item in this historic confirmation is the fact that prices rose in India, China, and Japan, the great silver standard countries of that time, from the middle seventies to the middle nineties. During this double decade both the silver product was increasing greatly and many occidental nations were changing to the gold standard and closing their mints to silver. Thus the silver conditions were the very reverse of the gold conditions. The supply of silver was increasing and the demand for it decreasing, with the result that silver was cheapening during the very years when gold was appreciating. Those countries which measured their values in terms of silver registered a rise of prices of from

ten per cent in China to about thirty per cent in India during the very double decade when prices fell steadily in the gold standard occidental countries. This seems to be a double confirmation of the proposition that changes in the supply of primary money media are the leading explanations of changes in the trend of general prices.

CHAPTER V

EFFECTS

i. On Business Generally

A PERIOD of steadily rising prices is a period of stimulated activity for the business world generally.

A captain of industry, a manufacturer, who has been successful and is planning to build an extension to his shop or factory, will think it to his advantage to build as soon as possible if he believes prices are to continue to rise for a considerable time to come. To build now will mean that his building material and all machinery and equipment for his new building will cost him less than it will if he waits six months or a year. Wages, too, may rise if he waits, and the labor cost of his new addition thus be increased. Furthermore, if prices are to continue to rise, he expects the market for his goods will be "lively," and it will be to his advantage to have his new extension in use at the earliest possible time. He is, therefore, ready to take any risks. He mort-

gages his older plant, if necessary, to get funds to finance his improvement. He thus enters the market as a borrower, increasing the demand for loanable funds, and as an employer of labor on new enterprises, helping take up any slack there may be in the demand for labor or to add to the pressure for higher wages if substantially all labor is already employed.

As this manufacturer reasons, so reason his customers in the retail business. Anticipating higher prices, they lay in their next season's full stock early. In place of buying samples only, they avail themselves of credit, if necessary, to get the advantage of whatever rise may occur. This employs jobbers busily and gives ample notice to factories, so that their products may be sold long before produced.

Everyone directing affairs in the business world, from humblest contractor to most exalted banker, is optimistic and confident. Optimism and confidence set credit free. The would-be builder can secure his loan and the retailer can get his goods on time or secure a loan to pay for them. All goods are on the move, all men are employed to keep them moving, all drummers' conclaves and all directors' meetings are cheerful. Prosperity is.

2. On Wages

But is this so-called prosperity shared out equally to all?

Wage earners share, through rising wages, in the prosperity of the rising-price period, but wages generally do not rise so rapidly as do prices. This is what one would expect, reasoning abstractly, and this is what is shown by correlation of wage and price facts. The first effect of a steady price-rise period upon wage earners is to increase the call for wage workers. Employable unemployed find work again, and those who have been employed part time only get full time places. The rise in prices must continue some time to beget the venturesome spirit outlined above, and must continue longer before it takes up the whole unemployment and part time slack. It must continue still further before employers and labor leaders both see clearly that labor is scarce, that the tables have so far turned as sometimes to make several bosses compete for the services of the same man or group of men. Prices must have risen appreciably before laborers begin to grumble at the higher price levies on them as consumers.

The time is now ripe for wages to begin to advance. Employers know the scarcity of workers and are already reaping pleasing profits. They are eager to keep their plants running to full capacity, that they may take utmost advantage of this profit-making time. They are, therefore, disposed to yield quickly to any pressure for wage rise or even to anticipate such pressure. The workmen also know that labor is scarce and know that since the things they must buy are all mounting in price, employers must be making more than before and must, therefore, be both able and, rather than have work stop, willing to grant wage rises. So it comes about that, in a few places, employers voluntarily raise wages, and in many more wages are raised at request, or at threat of the workers. Any employers who still resist are likely to suffer from an unhesitating strike, for the condition described above is perfect strike weather.

When unusual profits are to be lost if work stops, when promising orders from insistent customers may be lost altogether, the employer thinks several times before precipitating a strike. On the other hand, the employees know the employer's hesitancy. They are also strengthened greatly by the facts: (1) That

labor generally is fully employed and any strikers can therefore be assured the fullest measure of support in the form of strike pay and the greatest freedom from "strike-breakers." (2) That since wages have already been raised widely and since the advancing cost of living is in clear evidence to everybody, the burden of proof is rather distinctly put upon the employer to show excellent reason for refusal to raise wages. (3) That public sympathy, because of 1 and 2, is likely to be strongly on the side of the workmen.

But all this takes time and prices are steadily rising. They have risen probably eight or ten per cent before any especial pressure is noticed by consumers. They must have risen, perhaps, ten per cent, and all things must point to their likely continued advance before employers will be at all assured of profits or eager to avoid a strike. By the time a wage advance of five per cent is secured, prices will be found probably ten to fifteen per cent higher. By the time wages are slowly crowded to a ten to fifteen per cent rise, prices are likely to be twenty to thirty per cent higher, and so on. Wages rise, but they quite generally lag in their rise considerably behind the rises in prices, and never rise generally so high

as do the retail prices generally of the goods workmen must buy.

Illustrative facts may be cited.

The last general wage study made by the Federal Bureau was made in 1908, covering wages for over 350,000 workmen in wide range of industries and intended to be representative of the wage situation generally in 1907. This report summarized that the full time weekly wages of the studied workmen in 1907 were a little over twenty-two per cent higher than were corresponding wages on the average from 1890 to 1899. Compare these wage advances with advance in the retail prices of fifteen articles of food which have been chosen so that they represent approximately two-thirds of the expenditure for food by an average workingman's family. These fifteen food articles are listed in the Federal report on retail prices as averaging twenty-eight per cent higher in 1907 than in the nineties. Omitting sugar, which was the one item cheaper than in the nineties, the remaining fourteen items average a little more than thirty per cent higher.

No general Federal wage report has been published since this report covering 1907, but several reports giving special wage returns

from 1907 to 1913 have been published. The most complete of these wage reports gives for the United States and for May 15, 1913, the union scale of wages in the same forty cities from which the retail prices of the fifteen food articles are gathered. This makes it more acceptable to coordinate these wage rates and the retail prices. These forty cities include approximately one-third of all gainful workers in the United States, excluding those in agricultural pursuits. The union scales, as given, state definite wages agreed to by employers and under which the men are actually working. For the six groups of unions giving data, the following table gives the average per cent of rise in union wages since 1907:

PER CENT OF INCREASE AVERAGED BY UNION GROUPS
IN RATES OF FULL-TIME WEEKLY WAGE
FROM 1907 TO MAY 15, 1913

<i>Trades</i>	<i>Average Per Cent of Increase</i>
Bakery	19.4
Building	11.4
Granite and Stone.....	5.3
Metal	13.1
Printing, Book and Job.....	11.8
Printing, Newspaper.....	10.8
<hr/>	
Average of these Averages.....	11.97

The fifteen selected food articles, mentioned above, listed in May, 1913, at 161.7 as compared with 128 in 1907. This shows a rise in the average retail price of these food articles of 26.3 per cent during the same time in which union wages on the average rose only 11.97 per cent. The figures are not yet printed showing the wage scales of these unions for the later months of 1913, but it does not seem likely that their average wages could have been very greatly increased from May to December, 1913, when they rose less than twelve per cent in the preceding six years.

The figure for the retail price of the fifteen food articles averaged for the last four months of the year 1913 is 174.6. This figure shows the swift rise in the food cost of living during the year 1913, the last four months of the year averaging, for these fifteen articles of food, eight per cent higher prices than in May of the same year. This figure 174.6 shows an average food cost rise of 36.4 per cent for the last four months of 1913 above the average for the year 1907, to be compared with a union wage rise for the same period little, if any, more than twelve per cent.

Other Federal reports giving the wages in special industries for 1913 confirm the facts

stated above, as the following table computed from them will show:

RELATIVE FULL-TIME WEEKLY WAGES FOR CERTAIN
INDUSTRIES IN 1913 AS COMPARED WITH THEIR
AVERAGED WAGES FOR 1890-1899 AS 100

<i>Industry</i>	<i>Relative Rates Weekly Wage</i>
Boot and Shoe Manufacturing.....	133.5
Hosiery and Underwear Manufacturing.	141.1
Cotton Manufacturing.....	153.3
Woolen and Worsted.....	137.8
Lumber Manufacturing.....	131.4
Millwork Industry.....	129.9
Furniture Manufacturing.....	129.2

The above figures must be compared with the figure 167 per cent for the price average of the fifteen food articles for the year 1913, or perhaps with the figure for these same articles for the last four months of that year, 174.6. Wage increase is thus shown to have lagged far behind food price increase.

Dr. I. M. Rubinow, in a recent study published in the American Economic Review, gives a table to indicate the purchasing power of money wages in the United States as measured by the retail prices of food. Such a table combines the wage and price data given above,

and puts the same conclusions in a different form:

**PURCHASING POWER OF WAGES IN THE UNITED STATES
MEASURED BY RETAIL PRICES
OF FOOD—1890 TO 1912**

Averages for 1890 to 1899=100

<i>Year</i>	<i>Purchasing Power of Weekly Earnings</i>	<i>Year</i>	<i>Purchasing Power of Weekly Earnings</i>
1896	104.7	1905	98.6
1897	102.5	1906	98.0
1898	100.1	1907	97.7
1899	99.8	1908	93.
1900	100.2	1909	89.4
1901	96.8	1910	87.2
1902	94.3	1911	88.9
1903	97.3	1912	85.3
1904	96.		

The conclusion from this table is that, in 1912, American workmen were able to buy only 85.3 per cent as much of food, at retail, with their weekly wages, as they could have bought during the nineties.

The British figures give results similar to those shown by the American figures. From the *Sixteenth Abstract of Labor Statistics* for the United Kingdom, the following table is compiled:

COURSE OF BRITISH WAGES AND RETAIL PRICES
 Wages and Prices of Year 1900=100

Year	Wages		
	Including Agriculture	Excluding Agriculture	Retail Food Prices
1896	89.92	89.24	91.7
1899	95.37	95.06	95.4
1906	98.42	97.60	102.
1910	100.32	99.70	109.4
1912	102.98	102.46	114.5

These figures show, in brief, that, while British wages in 1912 were less than three per cent higher than they were in 1900, the retail prices of the food these workmen had to buy had risen over fourteen per cent during the same twelve years. This registers a ten per cent loss in food purchasing power to the British workman in the twelve years.

Such facts as stated above indicate that while workmen may advantage in a rising price era by having more regular employment, their weekly wages do not rise so rapidly as do the prices of their living necessities.

3. *On Salaries and Bond Incomes*

Receivers of salaries are apt to suffer still more than wage earners. Salary range is more fixed. The salary lists for public school teachers and for public employees gener-

ally, will not commonly be found appreciably changed in the past fifteen years, although, as indicated above, wages have advanced and have advanced far in some lines of manufacture. The more nearly an income approaches fixedness, the heavier its receiver's loss in a period of rising prices.

This may readily be shown by using interest incomes from first grade long time bonds as illustration of the fixed income. Suppose that an investor pays par value for a \$1,000 bond bearing four per cent interest annually. Suppose that during the following year prices rise two and one-half per cent, about the actual corresponding annual average rise during the last eighteen years. This rise of two and one-half per cent in prices means that the investor at the end of the year must have \$1,025 to be able to buy the same amount of general commodity which he could have bought with his \$1,000 when he invested in the bond. Assuming that at the end of the year he can sell his bond for \$1,000, he will then have, in interest for the year and in principal, \$1,040. But he must have \$1,025 to buy the same things he could have bought for \$1,000 at the year's beginning. Therefore, his \$1,040, while forty dollars more in money, is really only fifteen

dollars more in purchasing power than he had at the beginning. And this fifteen dollars will not purchase so much as fifteen dollars at the first of the year. Furthermore, he probably could not get the full \$1,000 for his bond, just because of this small net return in purchasing power. But disregarding these minor losses, the major fact is clear, viz., that he has received, net, only fifteen dollars interest on \$1,000, or one and one-half per cent instead of four per cent.

This example makes clear the principle that a general rise in prices lowers the real income of those whose dollar and cent income is fixed. This principle may be shown directly by consideration of the repayment of the principal sum when the bond matures. At maturity the bond is redeemed by the payment of \$1,000. If such a bond had been purchased for par in 1896 and redeemed in January 1, 1914, the investor would have been able to buy, with his \$1,000, in general wholesale commodity in the United States, what \$740 would have bought in 1896, and in general retail food supplies, what \$575, only, would have bought in 1896. That is, after letting others have the use of his \$1,000 for eighteen years, and in the meantime receiving year by year forty

dollars for its use, he finds at the end of this long period that, in purchasing power terms, his capital has shrunk to less than three-quarters what it was—or, measuring in retail food prices, to only fifty-seven and one-half per cent what it was when he loaned it.

Bond price returns evidence this serious loss to holders of long time bonds. The bonds of even great nations such as the United States, Great Britain and France have been steadily declining in price during the long rising commodity price period. French Rentes, for example, which sold at average annual net price of 102.95 in 1896, were quoted at ninety-two and seven-tenths in April, 1912, and at eighty-seven and two-tenths in February, 1914. British Consols dropped steadily from ninety-four and three-eighths in 1902 and after the South African War was ended, to seventy-two and five-eighths in 1913. The Wall Street Journal publishes from time to time a chart giving the course of average quotations for twenty-five representative railway bonds. For 1906 the quotations for these twenty-five bonds averaged 97.915; for 1912, 90.945.

Staple municipal and industrial bonds show the same general tendency as these railway bonds. The same thing is shown from a dif-

ferent angle in Babson's table of the average yield of five selected bonds. These bonds in the years from 1896 to 1900 were yielding an average of 3.36 per cent, while in the year 1913 they yielded on the average 4.22. Since their actual rates for interest were fixed, this means that in 1913 they could be bought for less than in 1896-1900, less by an amount sufficient to raise the interest return to the buyer from 3.36 per cent to 4.22 per cent.

A spectacular effect of this falling price period for bonds is the heavy loss to such institutions as savings bank and insurance companies, if the current market value of their large bond holdings be compared with the prices they paid for these securities ten to twenty-five years ago. This loss, however, in the case of such institutions may perhaps be disregarded as a "paper" loss only, since they will continue to hold the bonds and at maturity will get par for them. For example, thirty year three and one-half per cent bonds issued twelve or fifteen years ago may have cost the savings bank par. If the bank were forced to market the bond in these years, quite apart from the financial disarrangements due to the war, it would probably lose fifteen to twenty per cent of its original investment.

Both the reasoning and the facts establish the proposition that in the past years of rising commodity prices bonds have tended downward steadily in price.

4. On Debtors and Creditors

The reasoning above with reference to bonds applies generally to the relationship of debtors and creditors in a period of rising prices. The borrower gets a fixed sum and pays a stipulated interest. As prices rise, the interest has lowered purchasing power, and the principal when paid has declined in purchasing power just as in the case of bonds. The creditors of long standing obligations are suffering, then, in this period of rising prices just as the debtors suffered from falling prices during the period from 1876 to 1896.

5. On Owning Producers

This rising price period has been one of large gain to farmers, gardeners, fishermen, and timbermen who are owning producers. In the Federal wholesale price list, farm products as a whole are shown to have sold for 65.8 per cent more, on the average, during the year

1913 than during the nineties. The price-listed fish items, averaged thirty-six per cent above their nineties' prices, despite the fact that one of the four items, mackerel, was selling twenty per cent cheaper than in the nineties. The nine lumber items, giving relative prices, gave an average price in 1913 eighty-three per cent higher than their average for the nineties. In the case of fishermen, the prodigal catches of the past generation are beginning to lessen appreciably the stock of food fish and the smaller individual catches for the season may offset the risen price obtained.

Neither does timber give a generally shared advantage through its risen price. Its price has risen, in appreciable part, because small lot marketable lumber, near the greater demand centers, has practically disappeared. But the large rise in farm products registers a widely diffused gain in the United States. The last census listed 6,361,502 farm operators in the United States and listed farm property as worth \$40,991,449,090. This valuation for farm property is just a shade more than double its valuation in 1900, only ten years before. This enormous valuation increase is due, in large part, to the capitalized increase of return from farm land, made possible through

the increased prices of products from that land.

Fifteen years ago a mortgage blanket lay over the whole Mississippi Valley. A generation of homesteaders seemed so hopelessly in debt that the electorate of the nation very nearly revolutionized the nation's monetary system, moved, in no small part, to this decision by eloquent appeals in behalf of farmer debtors. Today those mortgages hang on the walls of new farm houses, framed as mementoes of pioneering hardships. The banks in the great farming districts have enormous deposits to the credit of the farmers. New houses, new barns, better stock, latest labor-saving machines evidence prosperity. An increasing proportion of the farm work is being done by power machinery. Some of the villages of wheat farmers in the Upper Mississippi Valley boast a larger number of automobiles owned in proportion to their populations than any of the large cities.

The past eighteen years of rising prices have been a happy period for the owning producers of the United States. And when it is remembered that they, with their employees and dependents, constitute nearly one half of the nation's population, their growing prosperity

will be seen to be a very great gain for the nation.

6. On Interest

During a period of steadily rising prices, interest rates rise. The cause for this has already been indicated in dealing with the acceleration of general business enterprise due to a rising price period. The lowering prices of long term bonds, also cited above, is but one of the effects of the rising interest rate. Interest rates do not rise so rapidly as do prices. Because neither wages nor interest rates rise so rapidly as prices, the rising-price period is a period of larger profit opportunity to business enterprisers. This leads them to venture further in business expansion, to borrow more freely, and thus to increase the demand for loanable capital. This increased demand slowly registers itself in a higher interest rate.

So long as the price rise is hurrying ahead of the interest and the wage rise, there is lure for the enterprisers to borrow more and more, and, therefore, the interest rate tends steadily to rise during a period of continually rising prices. During this recent rising price period, interest rates have been driven upward

in the United States. Types of securities such as municipal and first grade railway bonds, which would net a purchaser only three per cent to three and three-fourths per cent on his investment, twelve to fifteen years ago, can today be bought at prices realizing for the investor from four per cent to five per cent. On the other hand, borrowers who with given security could get their long-time loans readily at 5 per cent a dozen years ago may have difficulty in getting similar loans for six per cent now. And it should be noted that a rise from five per cent to six per cent, in prevailing rate of interest, is a rise of twenty per cent in the amount of interest to be paid for a given loan.

Roughly, what has happened during the past eighteen years is that general wholesale prices in the United States have risen some thirty-five per cent, general retail prices probably over fifty per cent on the average, while the prevailing interest rates have risen twenty per cent to twenty-five per cent.

7. On Crises

A financial or an industrial crisis, or the battering combination of both financial and industrial crises, may occur during a period when

the fundamental factors are making for a steady general rise in prices. In such a case, the crisis is apt to be less severe and the depression period following the acute crisis is sure to be less prolonged than if fundamental factors were not forcing prices upward. Whatever may have caused the crisis, it is clear that when that crisis drives prices downward, although important influences are impelling them upward, it is working directly against the fundamental tendency and, therefore, cannot be so extreme in its effects.

If the analysis of rising price causes made in foregoing chapters is correct, then the great increase in the world's gold supply and the notable perfecting of the exchange machinery generally, are the fundamental causes which are driving prices upward. These causes have been steadily at work since the late nineties. The coming of a business crisis would not appreciably interfere with either of these causes. For example, during the year 1908, a depression year for general business, the world increased its gold production above that of 1907 by nearly \$30,000,000, one of the largest annual increases in the past twenty years.

The main explanation of the quick recovery from the serious 1907 crisis is that the basic

factors were pressing urgently upward on prices. Every month which the business depression continued only served to increase the upward pressure of these factors. The ultimate result was that, although the crisis period was the end of 1907 and the beginning of 1908, prices had generally rebounded by the end of 1909 to as high a point as before the crisis and averaged, for the year 1910, over two points higher than for the year 1907.

Contrast this quick recovery with either the crisis of 1873 or that of 1893. Both of these came in periods when the tendency of prices generally was downward. In both of these cases the sharp crisis was followed by a serious depression lasting for three to four years. General prices in the nineties, for example, were not lowest in the crisis year, 1893, nor yet in the year immediately following, but they kept steadily sagging lower and lower until they touched the lowest level for annual average price in 1897, the fifth year of the panic and depression series.

8. On General Social Reform

Not the least important of the effects of a period of rising prices is its stimulus to social reform. The very downward pressure upon

the standards of living of the great body of wage earners, due to the fact that wage rises more tardily than does price, compels a new social invoice. The new invoice both restates the ages-old inequalities of wealth distribution and of burden bearing among men, and forcibly presents the new tendency to the increase of those inequalities through laggard wages and hurrying prices. In a prolonged period of rising prices the general industrial democracy is sure to be more active, more aggressive, and more convincing in its campaign for the equalization of economic opportunity.

The increasing difficulty of making family incomes adequately supply family needs stimulates all manner of detail social reform movements. Older philanthropic societies emphasize the direr needs of their proteges and older political reform leagues renew their exhortations to public economy. New societies spring into being, one for the lowering of rents, another for instituting or for extending public free markets, a third which leagues housewives for common purchase of their daily supplies. The great political parties all search for vote-inducing proposals to decrease the cost of living. Manufacturers and retailers, stung by frequent charges of extortion in their prices, invent cost

cheapening processes and methods of business organization.

So men are roused to better the modes of the production and the distribution of wealth, more rational consumption of wealth is stimulated, the philosophy of man's relations to wealth is deepened and broadened, and the whole social machinery is steadily modified that it may function more perfectly in behalf of deep democracy—all through the urge of a rising-price regime.

In summary of its leading effects, then, a prolonged rising-price period energizes the business world generally, operates to the advantage of debtors and of owning producers and to the disadvantage of creditors generally, of wage earners, of salaried persons, and of receivers of fixed incomes; causes interest rates to rise, lessens the severity of crises and the duration of depressions and stimulates social reconstruction, both in fact and in philosophy.

CHAPTER VI

REMEDIES

IT seems commonly assumed that rising prices are regrettable altogether and that something should be done speedily to stop the rise. So come the wise men and the doctors, each with his prescription for the ailment. This one would destroy the tariff and that one the trust. Another would solve the whole problem by making better public roads and still another by converting the world to vegetarianism. There are almost as many remedies proposed as there are doctors. And all the time rising prices are calmly assumed to be a symptom of social disease.

i. Rising Prices May Be Beneficial

Our brief study of the effects of a rising price period makes clear that rising prices are not altogether evil. To millions in the nation the rising prices have been a great blessing. Even the great wage-earning classes whose losses, through their decreased real incomes,

are appreciable, have some offsets. Perchance they have a far greater offset than our hurried survey suggests, in the speeding up of general social reconstruction, a process ever in favor of the common man. The receivers of fixed incomes, notably the holders of long-time bonds, are the absolute losers, with no recourse. The very social reconstruction which may advantage the wage earner not infrequently levies some additional tax burden upon the owners of such property. But the people who are mainly dependent upon unvarying dollar and cent incomes from bonds, annuities, allowances, pensions, and the like, constitute so small a fraction of the whole nation that their losses, from a social viewpoint, are far outweighed by the considerable gains to the millions of independent farmers.

In the very beginning of a discussion of so-called "remedies," then, emphasis should be put upon the fact that large social gains have been made because prices have risen.

It remains decidedly worth while, nevertheless, to seek:

(a) — An estimate of the future duration and extent of the rise, if no artificial check be introduced.

(b) — Means to secure highest possible offsets, during the continuance of rising prices, for such losses as are due to rising prices.

(c) — Means to stop the rise of prices deliberately, if the losses, due to the rise, so greatly exceed the gains that resort to artificial control over general price is deemed to be necessary.

2. Will Prices Continue to Rise?

The basic explanation of generally rising price has been shown to be that the rapid increase of gold supply, combined with the rapid improvement of the general machinery of exchange, has increased the money service of the world more rapidly than the rising volume of the world's exchanges has increased the world demand for money service. Therefore, the duration of the rising price period and the greatest height of rise are dependent upon the future relationship between the volume of business and the gold exchange conditions. So long as the gold exchange machinery increases in effectiveness more rapidly than the volume of business exchanges increases, prices will continue to rise.

There are natural checks upon the increased effectiveness of the gold exchange machinery.

This increased effectiveness has been shown to come in part from the actual annual increases of the gold supply. Among the leading natural checks upon this annual gold increase are: (a) Exhausting of known gold deposits without discovery of new deposits; (b) Slow improvement in processes of mining and of extracting gold; (c) Steady cheapening of gold, making it less and less profitable to work given veins and mines. We shall consider these in their order.

(a)—For some years the gold output of the world outside of the Transvaal mines has been nearly stationary, while the output of the Transvaal has been increasing. The strike of the white miners on the Rand, in the summer of 1913, caused a decreased Transvaal production and the world production for that year fell behind the output for 1912. In this connection it is suggestive to note that a Transvaal correspondent for the London Times reported in 1912 that the yield of gold, per ton milled on the Rand, fell steadily from 35.8 shillings in 1905 to 27.9 shillings in the first nine months of 1911. These mines would doubtless be worked steadily at even considerably lower figures of ton yield, but the decline is significant. When the ores of this

richest of the world's known gold producing areas, this area which in recent years has been furnishing from thirty-five per cent to forty per cent of the whole world's output, drop nearly twenty-five per cent in only six years, in their yield per milled ton, the fact that known deposits of gold move toward exhaustion is in evidence.

(b) — The great and steady annual increase in world output, begun in the nineties and continued until recently, was caused mainly by the invention of the cheap cyanide and chlorination processes for extracting gold and the general perfecting of the extractive process. So great were the improvements of the last quarter of the nineteenth century that it became highly profitable to work over the dump heaps of some of the older mines and it became, for the first time, at all possible, profitably, to operate such a low grade property as the now famous Treadwell mine.

Over ninety per cent of the gold is now recovered from even the most refractory ores, so that there is little more gold left in present-day dump heaps than can be found in sea water. The limit of perfected processes is being approximated and it is altogether unlikely that the coming generation will make

improvements either in mining gold ore or in modes of extraction of gold which will even begin to offset the exhausting of the known gold fields.

The only likely means of appreciably increasing the world's annual output in coming years will be the discovery of new gold fields. No one can foresee what may happen to the lucky prospectors of tomorrow. Possibly a new Klondike, or a new California area, may be found within a twelvemonth, anywhere in those great gold-hearted ranges of mountains from Alaska to Cape Horn. Possibly there is a second Rand country, hidden nearer the heart of Africa, which may be hurrying its heavy gold to the tills of exchange within the coming decade. But just as possibly, the world may move on for another long generation without the discovery of a single new important field, just as it did after the very antipodes, California and Australia, almost simultaneously maddened the gold-seeking world with their new treasures, in the middle of the nineteenth century.

At least it can be clearly affirmed that, unless important new extensive and rich gold deposits are discovered, all signs indicate that the gold producing world will have difficulty,

in coming years, even to equal its records for recent years.

(c) — The third natural check upon increase of annual output of gold is the very cheapening of gold itself. That is, labor, machinery, food—all the items of service and supply necessary to the working of a gold mine—are rising in gold cost. For example, if ten years ago it took thirty ounces, out of every hundred secured, in a given mine to pay the costs of mining and reducing, today it will take probably forty to forty-five ounces out of every hundred, supposing that the ore still runs as richly and easily and that no important changes in process have been made. And with the same assumptions, if the prices of labor and mining supplies should rise twenty-five per cent higher in the next ten years, it would then take fifty to sixty ounces out of every hundred mined to pay the mere running expenses of the mine. The profit margin in the obtaining of gold thus steadily decreases as the prices rise. This means that mines which were barely profitable to work ten years ago are not profitable to work today, even supposing that they yield just as much gold for given labor applied. Such mines will be abandoned and to that extent the world's supply for the next year will

be lessened. Every considerable increase in prices will add to the number of abandoned mines and to the abandoning of the poorer veins of mines whose better ores may still be worked profitably.

Successful gold mining is, then, its own worst enemy, and, because it forces world prices upward, it automatically checks its own activity. This check, though slow and never spectacularly obvious in action, is none the less a steady and a real check upon increased world gold production. Taken in connection with the natural exhaustion of the better ores and the greater expense attaching to mining in deeper shafts, it makes strongly for diminishing profit returns from all older mines.

3. Diminishing Ratio of Annual Gold Output

To the consideration of these actual checks upon the total annual product mined, there should be added consideration of the fact that the world's total stock of gold is steadily growing. Year by year, larger and larger amounts must be mined if the ratio of new gold to stock of gold on hand is to be maintained. For example, if the total stock of world gold today is worth \$15,000,000,000, then \$450,-

000,000 of new gold, mined in the coming year, would increase the world's stock by three per cent. But if this annual gold increase of \$450,000,000 were continued for less than thirty-four years, the stock of world gold would then be \$30,000,000,000. A new gold output of \$450,000,000, for the thirty-fifth year would then be an increase of only one and one-half per cent. That is, the pressure for increased prices, due to gold increase alone, would be only one-half as great for the thirty-fifth year as for the first year, the actual amount of gold increase being the same for each of the years. *On this account alone, unless the actual annual output of gold continues steadily to increase, by 1930 or 1940 the ratio of annual gold increase to gold stock on hand will be so small that the increased volume of world business will probably overtake the increased money service and general prices will cease to rise.* But the actual checks upon increased gold supply show it to be problematic, if not improbable, that the present world gold output will even be steadily maintained. If the present annual gold output should be curtailed appreciably, in approaching years, so much the sooner will the time come when general prices will cease to rise.

4. Perfecting and Extending Exchange Machinery

Great increase in the world's stock of gold has the effect that, within a given time, more money service will be rendered, the exchange system remaining the same. And, likewise, great improvement in the exchange machinery has the effect that, within a given time, more money service will be rendered, the stock of gold remaining the same. In either case the change makes for rising prices.

The exchange machinery may become more perfect either by invention of new appliances and methods, or by extending the use of important older appliances or methods.

Every new acceleration of communication or of transportation, every newly found short cut in accountancy, every betterment of the mercantile credit system, every invention of means more generally to mobilize the banking reserves of a nation, enables one gold dollar to be the adequate reserve for a larger amount of business done within a given time. The new Federal Reserve Act is but a large scale improvement in exchange machinery. Its centralization of the nation's banking reserves and its note issue, on commercial paper, are

simply grand scale extensions of money service, enabling a given gold reserve to support a large volume of trade. In this generation of notable applications of science to business, the generation of efficiency engineers, the great probability is that further and important improvements in exchange machinery will continue to be made year after year. Such improvements will range all the way from perfected adding machines to swifter ocean greyhounds and from township improvement of highways to national betterment of taxation and money and banking systems.

Extension of well-tried older improvements will also play a highly important role. The coming generation, for example, will probably see, perhaps reaching throughout the commercial world, a far extension of the bank check system, so widely developed in the United States during the past generation. It has been estimated that over ninety per cent of the business settlements in the United States are made in bank checks. If the coming generation should see the checking system as freely used throughout the commercial world as it is used today in the United States, that case of the extension in the use of an older improvement in exchange machinery would alone greatly in-

crease the volume of business which could be transacted with a given gold reserve.

Many other exchange improvements, known in the leading commercial nations for years perhaps, will gradually be adopted by the more backward peoples. Hottentots may be found ordering hairbrushes by telephone, and Fiji Islanders, whose great-grandfathers wearied mentally if they attempted to count five, may be found hammering out bank balances on Burroughs adding machines. It is entirely within the range of possibility that the great Chinese people, only yesterday seemingly fixed for all time in the rigid mold of patriarchalism which deified changelessness, may tomorrow be instructing the commercial leaders of the world in the use of their latest improvement in machinery of exchange.

5. Expanding Volume of Trade

The other side of the scale holds the volume of business. Is the volume of exchanges likely to surpass its record of past years?

Steady increase of world population means steady increase of the labor force of the world. The modern organization of industry has been effective in massing a greater and greater volume of capital. Fast as poulation

has grown, capital has grown still faster in the leading commercial nations. For example, the population growth of the United States has been phenomenal and yet, while the population of the United States rose from a little over twenty-three million in 1850 to a little over eighty-two million in 1904, the estimated wealth of the United States rose from seven to a hundred and seven billions of dollars in the same period. Wealth multiplied by more than fifteen while population multiplied by less than four.

Natural science is continually perfecting the productive process on the mechanical side, and business science is perfecting it on the labor organization and management sides. So given labor and given capital are made daily more fruitful in goods. Nor is it time to say the greatest is past. Wonderful as have been the mechanical and the organization improvements in the world of production during the past century, it is entirely possible that one generation to come may eclipse even that century. It may seem foolishly optimistic to suggest that the great century which first importantly applied steam and electricity and with them mastered land, sea, and air, should ever again be equaled by any century to come. Yet, won-

derful as have been the mechanical and organization improvements of means of production during the past century, and wide and fertile as have been the new areas it has added to the producing world, it is entirely possible that one generation, of the near future, perhaps, may eclipse even the nineteenth century in productive improvement.

Who can forecast the future of synthetic chemistry? When the story has just been told that Thomas Edison has this very year built and equipped a great laboratory which is supplying his record plant with tons of synthetically produced carbolic acid, it is time for the world to await breathlessly the next hour's report from the synthetic chemist. Rubber has been so produced, why not flour? Gems have been so produced, why not sugar? That the cost in practically all these synthetic processes has been prohibitive of production for the market means nothing, except that organizing business brains and energy, such as those at Thomas Edison's command, must turn themselves to the practical problem. Carbolic acid had been synthetically produced before by several different methods. When the war cut Mr. Edison off from his customary supply of that acid from Germany, he seized upon

these synthetic methods, chose one of them, and in less than a month was producing the acid commercially.

The generation which succeeds in producing flour and meal and sugar and wine, cheaply, by a synthetic process, will have made a vastly more important step ahead in world production than the nineteenth century made when it added the Mississippi Valley and the Canadian and South American plains to the world's producing areas.

New applications of power, too, are conceivable. That man who succeeds in tapping directly Nature's reservoirs of electrical energy will increase the world's productivity more by this one step than all the steam and electrical devices to date have increased it. And why may this not come to pass? Why resort to the expensive, roundabout processes of feeding the furnace to run the machine to generate electrical energy, or why resort even to the less expensive process of harnessing falling water to generate electrical energy, when there are probably veritable oceans of electrical power already generated? Some one will find the way, and what an Aladdin vista will be opened! Steam engines will go to the junk heap or to the museum, coal mines will close

forever and will release their millions of slaving men. All the millions of workers released from the mines, from the making of machines for mining and from the distributing of coal, will be so much labor to be added to other lines of production.

The ghastly Malthusian specter of starvation, conjured again by realization that the United States has already exploited its richest resources, may be banished anew and for centuries, by the synthetic chemist and by the greatest of discoverers and explorers, those men who, in this twentieth century, may find and chart vast electrical seas.

These are but suggestions of the *possibilities* of increased production open to this twentieth century. They are listed here, not as fantastic imaginings, but as perfectly serious scientific forecasts of lines along which the men of tomorrow will so increase production as to surpass the marvelous achievements of the last century.

Then, too, the greatest of the world's populations are just beginning to use modern power-driven machinery. When twenty million tireless Chinese workers are turning out goods with the aid of the latest machinery and the newest methods, they will be multi-

plying their present product many fold. When India equips herself with modern machinery, the volume of the world's goods will be notably increased. Combined, these two peoples constitute fully a third of the world's population and they are both moving rapidly towards industrialization in occidental terms.

When such large items as the possible development of synthetic chemistry, the direct utilization of Nature's own electrical seas, and the steady and probably rapid industrialization of China and India are considered along with the normal expectancy of thousands of new appliances and methods and the steady growth of the whole world's labor force and capital volume, there can be no doubt that the world's volume of exchanges will increase greatly in the decades just ahead. Here again no man can know. All that can be said is that the elements making for an increased volume of exchanges are so important that the volume of exchanges may easily overtake, in its increase, the increase of gold supply, reinforced by even very great improvements in the general machinery of exchange.

It is entirely within the possibilities of the case that prices may rise more and more slowly until not many years ahead will see the culmina-

tion of this rising price epoch. Unless very wonderful new gold fields are discovered within the next twelve or fifteen years, it may happen that the historian of 2000 A. D. will write, "Prices rose generally throughout the commercial world from 1897 until 1925."

6. Effect of the World War on Prices

The great world war now raging makes fundamentally for higher prices. If it is of long duration, it may appreciably influence the price level of the next decade. Cities are being shattered, thousands of square miles of fertile country flooded and otherwise devastated, and billions of wealth are being burned by the contending gunners. And one short year will count three million dead! In cold, economic terms, this means the next generation will have appreciably less capital and labor than it would have had if the most civilized of the continents had not suddenly gone mad. The world over, too, business is seriously disrupted. All this means that the volume of exchanges will be smaller in coming years than it would have been if world industry had steadily advanced, in peace. However, unless the war is greatly protracted, or unless its area of land operations is greatly extended,

even some billions of capital and some millions of men may drop out of the commercial world's huge business marts without greatly affecting the price ranges for more than a few years at most.

7. Offsets to Losses Through Rising Prices

The facts that there are great world gains due to rising prices and that rising prices have their natural checks do not in the least change the further fact that the great wage-earning groups tend to be losers in a rising-price period. Public bureaus of statistics in democracies should be especially alert in such periods and should keep the public informed as fully as possible as to the changing wholesale and retail prices and the course of wages. The general public should bear in mind these returns. If wages are seen to be lagging but little behind prices as they rise, then the rising price era is substantially beneficial altogether. As a class, wage earners will have, in greater constancy of employment, a full offset for somewhat lagging wages. But if the gap between the price rise and wage rise yawns wide, if it is a growing gap, then public opinion should be strongly and clearly favorable towards wage earners' claims for increase. Price

and wage data gathered and tabulated scientifically should be the very pith of the argument to the arbitrators who are to decide whether the conductors or the firemen, the miners or the weavers are entitled to a rise in wage. Any prosperity would be hollow indeed which steadily inroaded living standards of wage earners. This seems to be the danger point. Straight general publicity of the essential wage and price rise facts will do more to safeguard at this danger point than a dozen of the patent medicine variety of remedies all applied at once.

The general stimulus to social betterment due to the pressure of rising prices may well be used to advantage by all friends of man. This is a good time to back a good cause. The general system for the distribution of goods is badly out of gear, and this is the time to get it into better gear. This is the time for mayors and aldermen and borough presidents and commissioners to be trying out public markets and bettering docks and improving traffic connections and prosecuting relentlessly users of false scales and scant measures. This is the time for great newspapers to throw the spot light fearlessly on purveyors of rotten and adulterated foods and wares

and to teach the public where and what and how to buy. This is the time for large corporations whose leaders have wakened to the greater joy of service, to establish shops and markets open to the voluntary trading of their own employees. This is the time for housewives to league themselves for study of the retail markets and for cooperative buying. This is the time for publicists to reform the tariff and the patent systems and to abolish factor's agreements. This is the time for schools and colleges to train the men and women of tomorrow in the practical arts, in knowledge of markets, savings systems, food values, laws of personal and public hygiene, and in the business and civic and aesthetic sciences. This is the time for all men and women to eschew the bizarre and the pretentious and the shifting styles and fabrics dictated by profit-hunting makers of goods and garments and to select according to their own tastes and means the comely, the genuine and the lasting. This is the time for the general electorate to insist upon wiser adjustment of the tax burdens and wiser expenditure of the public funds.

On the side of extractive production are many opportunities. Social action again

should be guided by the price returns. Our facts show us that basic cereals and meat and lumber have risen far more rapidly than general commodity. Honor, then, to the state which so stimulates its farm lads that this year's winner recorded nearly 154 bushels of shelled corn from one acre—over five times the country's average. This is the time for states and counties to spend less on the sorry little midways and the unconvincing professional horse racing, at their fairs, and to spend more in making it worth while for their citizens to breed good stock, raise prize peaches, and set yearly new records for corn and wheat and potatoes. This is the time for corporation, state and nation to safeguard the hills and woods, to irrigate, to drain, to connect up important waterways by canals, to plant young trees, to establish lines of communication and transport which will open new lands and make accessible new resources.

This is the time for the state to perfect the insurance and banking systems, to prosecute relentlessly thieving promoters of get-rich-quick schemes and to control closely stock and bond issues, all in the interest of promoting thrift and of increasing capital and of raising the standards of trustee morality. So, in

countless ways, individuals, private organizations, and civic bodies may labor for the better modes of producing and distributing wealth and for the saner uses of wealth, public and private. Every consumer in the land, whether wage earner or bond holder, will, as a consumer, be benefited by any such improvements.

But let it not be overlooked that each and all of these plans, many of them not infrequently presented as remedies for rising prices, are just as desirable, just as fitting to advocate and to promote when prices are standing still or when prices are falling. Such activities should be urged because they will make for public welfare, regardless of the course of prices. They should be promoted as positive, constructive means to better the lot of the average man at any and all times, rather than as negative mere offsets to alleged causes of rising prices.

8. Arbitrary Means to Stop General Rise of Prices

Thus far this chapter has outlined the probable future of the rising price period in view of natural checks to the basic causes and has suggested a wide range of means to lessen the losses through steadily rising prices, par-

ticularly those visited upon wage earners. In this list of means has been included those arbitrary means which may be applied to lower prices where price levels are high because of protective tariffs, extravagance, monopolies and the like, causes which, at all times, whether general prices be rising or falling, operate to keep the level of prices somewhat higher than it would otherwise be. It remains necessary to the completion of this survey of the problem of rising price, to deal briefly with leading artificial means proposed as adequate to stop the general rise of price.

Five such means may be treated briefly:

(a) — Let the primary money medium of the world be changed. Let the world adopt some other metal not cheapening so rapidly as gold.

This suggestion seems to be fatally weak. Gold has come to be the world's primary money metal through long evolution. Many other things, wheat, pease, eggs, camels, tobacco, slaves, salt, cloth, and baser and more precious metals than gold, have all been tried. Gold has slowly won out as the money medium possessing to the highest degree all of the characteristics essential for modern commerce.

It is durable, portable, divisible, impressible, homogeneous, cognizable and steady in value to degrees not equalled by any other money medium which society has so far tested. The only issue is the changing value issue. Gold satisfies all the other tests for good money well nigh perfectly. Changes in value of gold are as slow and as steady as those of any known thing. There is no reason for believing that any other medium substituted for gold as the world's money medium, might not change in value more rapidly and more capriciously than does gold. When all the shattering uncertainties to world business and all the heavy expense to be caused by *any* change in the world primary money medium are considered, in addition to the fact that, after evolution of some thousands of business years, gold has survived as the fittest of world money media, does it not become clear that the blithe, offhand, "Just-change-from-gold-to-some-other-money-medium" solution is unconvincing, if not altogether superficial and thoughtless?

(b) — The proposal to do away altogether with a primary money of redemption and to resort directly to fiat money is made. It is argued that the supply of paper money, issued

directly by the government, could be adjusted arbitrarily to the expansions or contractions of the volume of trade. The history of the paper money of the nations, at the periods when it became inconvertible and therefore approximated the fiat type of money, is a history of such financial distresses, business uncertainties and public and private dishonors, in direct connection with the inconvertible paper money, that he who runs should be able to read. The ills of present rising prices are of a genially-warm frying pan variety compared to a white-hot fire of price disasters likely to prevail under any fiat money system.

Furthermore, unless all the nations agreed upon a fiat money for the whole world, any nation adopting a fiat money would be compelled, in settlement of international trade balances, to use some medium having value. The fiat money scheme seems to be one of those dream logic systems which solves every money difficulty just so long as it is assumed to be applied among millennial men and under millennial conditions. Disregarding all history and assuming all men, and especially public officials, to be gods in intelligence and self control and angels in character, a fiat money system would work beautifully. But since

history is man's one best guide and since man must be confessed to be somewhat less than the gods, somewhat lower than the angels, the proposal to adopt fiat money as a cure for the relatively slight ills of rising prices, must be classed as a visionary project of unreason.

(c) — It has been proposed that governments should compel all business settlements to be made directly in gold. This would abolish most of the modern machinery of exchange. Strictly interpreted, it would make a bank a place for the deposit of gold only, and a place from which a borrower would take gold only. All transfer through book credits, all payments by paper money and checks and drafts and bills of exchange would cease. It proposes that society should well-nigh demolish its marvellous exchange machine because that machine is operating so well. It proposes that society should revert in substance to medieval barter conditions, because a part of the people have suffered some loss of real income during the past few years. This amounts to proposing that the business world should cut off an arm to cure a hang-nail.

(d) — One of the most persuasive plans for preventing rise of prices has been recently proposed by Professor Irving Fisher. In

operation it would amount to a compulsory adoption of a multiple standard system in all business settlements. The instrument to accomplish this is a "compensated dollar."

The actual standard dollar of the United States is to remain just what it is now—a gold coin containing 23.22 grains of pure gold. Professor Fisher proposes that after the adoption of his plan, those who bring gold to the United States government should be required to give, for each dollar of gold money paid to them, 23.22 grains of gold bullion increased by the percentage by which general commodity prices had risen since some fixed time for initiating his plan. For example, had his plan been in operation since the nineties and had general commodity prices risen thirty per cent from the year at which his plan was installed until 1913, then in 1913, to get a gold dollar any one would have to bring gold bullion weighing 130 per cent of 23.22 grains or 30.186 grains. Professor Fisher argues that, since the government would buy gold bullion on this new basis only, every dollar of United States gold money would, therefore, become virtually 30.186 grains of gold. The actual standard dollar, by yielding to the "compen-

sated dollar," thus is to absorb the full shock of upward price pressure, and general commodity price, year by year, will be kept at exactly the same level.

This ingenious plan assumes highly dependable accuracy in the gathered price data, justifying changes in the "virtual dollar" when very small general commodity price changes are registered. It involves a series of successive re-adjustments of business exchange to new dollars. It could not be applied to cover a reaction of general prices below the level of the initial period. Most serious of all, it practically proposes that the United States government should cease to have a primary money whose bullion value is its monetary value. That is, the United States would cease to have a real money of redemption. This redemption matter is the danger point of the whole system even now, and to propose to make even gold coins token money, to any per cent to which prices might rise, is to propose a very serious and questionable change.

(e) — Arbitrary action by the governments might take the form of limiting the annual output of new gold. Such a plan, at least, proposes to make the punishment fit the crime. The gold exchange system offends by causing

prices to rise, therefore decrease the gold output sufficiently to prevent the rise. The practical difficulties in the way of carrying out such a plan are considerable. It would require difficult determination of the total world amount of new gold desirably to be mined each year, of the gold mining firms or individuals to be limited, and their degrees of limitation. It would require elaborate and honest policing to enforce the limitations. Appreciably to curtail the world's output of gold, without very great hardship upon the gold producers of any one country, would require enforcement of limitations in at least three countries, Australia, South Africa, and the United States. However, these difficult practical problems doubtless could be solved if the need were pressing. This actual limitation to the increase of the world's new gold seems to be the one means open to the commercial world effectively to control the actual course of general prices without incidentally producing other results vastly worse than the ill whose remedy is sought.

Before any nation is justified in resorting to one of the above or to any other artificial methods of preventing general price rise, two propositions need to be established clearly:

(a) — That generally rising prices cause *much* more bad than good.

(b) — That general prices will continue to rise *considerably for a long time*, thus continuously increasing the excess of their bad over their good effects.

Our brief survey of the rising price problem seems to show that neither of these two propositions is yet demonstrated.

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Anyone who may desire to consult an elaborate bibliography is referred to *References on the Cost of Living and Prices*, by the Library of Congress, and brought up to 1913 by its last *Additional References* on these subjects.



Relative Retail Prices of Food: Simple and Weighted Average, 1890 to December, 1913, by Geographical Divisions
(Average price for 1890-1899 = 100.0)

Year or month	Simple average of the relative prices of 15 principal articles of food in each geographical division.						Relative prices weighted according to the average consumption of the various artifices of food in workingmen's families in each geographical division.					
	North Atlantic	South Atlantic	North Central	South Central	Western	United States	North Atlantic	South Atlantic	North Central	South Central	Western	United States
1890.....	101.7	100.4	102.0	100.6	106.0	102.0	101.9	100.6	101.7	100.9	105.2	101.9
1891.....	102.7	101.8	104.5	103.2	107.6	103.6	102.1	101.6	104.4	102.8	106.9	103.4
1892.....	101.7	101.2	101.8	99.9	104.0	101.0	101.8	101.2	101.9	101.1	103.4	101.6
1893.....	104.8	102.5	106.4	104.2	103.0	104.6	104.4	102.7	106.2	104.2	102.1	104.1
1894.....	99.4	99.5	100.0	100.3	98.1	98.5	99.2	99.6	99.6	100.4	98.0	99.2
1895.....	97.2	98.2	97.0	97.8	96.0	97.2	97.2	97.8	97.1	97.9	95.6	97.1
1896.....	95.7	97.1	93.9	95.4	94.1	94.9	95.9	97.3	94.0	95.7	94.2	95.2
1897.....	97.3	97.3	95.8	96.6	94.6	96.4	97.4	97.4	96.1	96.9	94.9	96.7
1898.....	100.3	99.7	99.3	100.4	96.7	99.4	100.2	99.7	99.5	99.9	98.0	99.7
1899.....	99.7	102.3	99.4	101.8	100.3	100.6	100.0	102.0	99.6	101.3	101.8	100.8
1900.....	103.0	104.7	102.5	102.2	100.7	102.9	103.0	104.4	102.5	103.1	102.2	103.0
1901.....	108.9	110.3	110.6	110.6	110.5	104.5	108.0	109.5	109.5	109.7	104.9	108.5
1902.....	116.2	116.7	117.4	119.3	111.9	116.8	114.0	115.6	115.4	118.7	110.9	114.6
1903.....	116.3	115.6	117.3	121.4	112.4	116.9	113.7	114.6	116.5	120.3	109.9	114.7
1904.....	117.6	115.8	118.1	122.2	114.8	118.3	115.5	114.9	116.2	121.1	111.1	116.2
1905.....	116.8	116.3	118.1	122.4	115.4	118.3	115.0	115.7	116.3	121.3	111.8	116.4
1906.....	121.4	120.8	122.3	126.8	118.9	122.4	119.1	120.0	120.6	126.0	115.0	120.3
1907.....	126.4	126.4	127.3	131.7	126.5	128.0	123.9	125.9	126.0	130.9	121.8	126.9
1908.....	129.2	131.0	133.1	138.8	128.4	132.5	126.5	129.8	131.5	137.5	128.9	130.1
1909.....	134.7	139.2	141.4	148.3	137.4	140.3	131.2	137.8	139.1	147.1	131.3	137.2
1910.....	140.3	149.8	149.7	157.8	146.3	148.5	136.3	148.4	147.0	156.7	138.8	144.1
1911.....	139.3	145.2	146.9	158.6	145.9	146.9	134.9	142.7	144.4	157.0	139.1	143.0
1912.....	151.4	165.4	159.8	166.9	151.8	148.7	153.9	157.6	157.6	165.3	145.9	164.2
1913.....	160.0	163.2	170.0	176.6	164.6	167.0	156.2	161.1	167.8	175.2	158.1	163.4

From Bulletin of the United States Bureau of Labor Statistics, 1914, Number 140, p. 11

Relative Wholesale Prices of Commodities, 1860 to 1913, by Groups of Commodities
 (Average prices, 1890 to 1899 = 100.0. The small figures in each column represent the number of commodities upon which the relative price for each specified group is based.)

Year	Farm products	Food, etc.	Cloths and clothing	Fuel and lighting	Metals and implements	Lumber and building materials	Drugs and chemicals	House-furnishing goods	Miscellaneous	All commodities
1860	" 117.1	" 124.1	" 140.9	" 129.6	" 160.2	" 98.1	" 252.8	" 202.3	" 124.9	" 141.0
1861	" 93.1	" 112.2	" 134.1	" 127.2	" 155.9	" 114.8	" 269.3	" 209.0	" 120.9	" 137.7
1862	" 132.9	" 133.5	" 180.3	" 128.9	" 173.8	" 166.4	" 325.0	" 160.8	" 146.9	" 163.1
1863	" 231.1	" 167.8	" 296.8	" 173.3	" 216.7	" 192.5	" 352.8	" 259.0	" 198.6	" 224.7
1864	" 328.1	" 244.6	" 431.6	" 247.3	" 347.3	" 264.7	" 427.0	" 341.1	" 269.9	" 317.5
1865	" 239.8	" 238.5	" 377.8	" 296.5	" 314.9	" 222.5	" 435.0	" 338.2	" 259.3	" 292.3
1866	" 187.4	" 230.8	" 326.3	" 290.0	" 279.9	" 205.4	" 409.1	" 240.9	" 219.3	" 260.3
1867	" 204.0	" 216.6	" 253.3	" 239.2	" 259.0	" 192.5	" 341.1	" 219.2	" 214.3	" 233.0
1868	" 232.9	" 226.4	" 210.2	" 228.8	" 237.8	" 185.1	" 316.1	" 274.5	" 214.9	" 227.5
1869	" 204.7	" 215.7	" 219.6	" 227.3	" 237.1	" 183.3	" 325.3	" 239.2	" 198.8	" 221.6
1870	" 167.8	" 196.2	" 200.9	" 204.3	" 205.3	" 154.3	" 297.7	" 214.1	" 197.2	" 197.6
1871	" 157.3	" 169.6	" 191.9	" 199.5	" 200.3	" 155.9	" 269.4	" 175.4	" 178.2	" 183.3
1872	" 147.3	" 168.0	" 203.2	" 185.5	" 233.5	" 166.1	" 273.9	" 180.4	" 153.8	" 190.0
1873	" 147.3	" 169.7	" 193.4	" 192.1	" 230.6	" 169.6	" 288.6	" 197.9	" 153.8	" 189.0
1874	" 171.1	" 170.7	" 175.7	" 191.2	" 201.6	" 154.5	" 282.6	" 196.1	" 151.3	" 180.4
1875	" 170.9	" 159.4	" 162.9	" 183.1	" 191.7	" 141.5	" 258.6	" 175.9	" 150.4	" 168.9
1876	" 134.7	" 149.2	" 147.9	" 165.5	" 189.1	" 136.4	" 248.8	" 157.8	" 145.3	" 156.6
1877	" 134.4	" 145.4	" 139.9	" 136.6	" 170.5	" 126.9	" 323.4	" 161.6	" 142.6	" 152.8
1878	" 115.0	" 123.3	" 128.9	" 134.4	" 154.1	" 114.4	" 307.0	" 141.5	" 124.3	" 138.0
1879	" 114.9	" 114.0	" 125.0	" 121.3	" 150.5	" 115.9	" 286.3	" 134.2	" 123.3	" 132.4
1880	" 133.8	" 130.0	" 144.2	" 142.4	" 172.6	" 124.6	" 275.6	" 140.4	" 135.4	" 147.5
1881	" 151.0	" 135.8	" 137.2	" 144.7	" 156.0	" 122.4	" 251.3	" 129.3	" 137.5	" 143.2
1882	" 158.2	" 144.4	" 136.3	" 143.8	" 158.3	" 126.5	" 239.0	" 129.5	" 138.7	" 145.5
1883	" 133.3	" 139.4	" 130.7	" 144.3	" 148.0	" 118.6	" 206.9	" 145.6	" 140.0	" 137.6
1884	" 131.0	" 125.6	" 121.9	" 114.7	" 128.0	" 116.0	" 178.3	" 121.7	" 119.9	" 125.3

From Bulletin of the United States Bureau of

1885.....	" 120.6	" 111.9	" 115.1	" 102.5	" 116.8	" 114.4	" 140.6	" 119.1	" 114.5	" 115.8
1886.....	" 114.7	" 108.6	" 116.1	" 98.3	" 115.0	" 117.5	" 125.9	" 115.4	" 102.4	" 113.5
1887.....	" 111.7	" 114.8	" 116.8	" 103.9	" 116.8	" 112.2	" 125.6	" 115.0	" 101.3	" 114.4
1888.....	" 126.6	" 111.5	" 116.5	" 106.3	" 117.4	" 113.0	" 118.7	" 113.6	" 107.4	" 117.9
1889.....	" 111.5	" 115.7	" 114.3	" 105.6	" 112.7	" 113.0	" 115.7	" 112.5	" 115.7	" 113.6
1890.....	" 110.0	" 112.4	" 118.5	" 104.7	" 119.2	" 111.0	" 110.2	" 111.1	" 110.3	" 112.9
1891.....	" 121.5	" 115.7	" 111.3	" 102.7	" 111.2	" 108.4	" 103.6	" 110.2	" 109.4	" 111.7
1892.....	" 111.7	" 103.6	" 109.0	" 101.1	" 106.0	" 102.8	" 102.9	" 106.5	" 106.2	" 106.1
1893.....	" 107.9	" 110.2	" 107.2	" 100.0	" 100.7	" 101.9	" 100.5	" 104.9	" 105.9	" 105.6
1894.....	" 95.9	" 99.8	" 96.1	" 92.4	" 90.7	" 96.3	" 89.8	" 100.1	" 99.8	" 96.1
1895.....	" 93.3	" 94.6	" 92.7	" 98.1	" 92.0	" 94.1	" 87.9	" 96.5	" 94.5	" 93.6
1896.....	" 78.3	" 83.8	" 91.3	" 104.3	" 93.7	" 93.4	" 92.6	" 94.0	" 91.4	" 90.4
1897.....	" 85.2	" 87.7	" 91.1	" 96.4	" 86.6	" 90.4	" 89.4	" 89.8	" 89.2	" 89.7
1898.....	" 96.1	" 94.4	" 93.4	" 95.4	" 86.4	" 95.8	" 106.6	" 92.0	" 92.4	" 93.4
1899.....	" 100.0	" 98.3	" 96.7	" 105.0	" 114.7	" 105.8	" 111.3	" 95.1	" 97.7	" 101.7
1900.....	" 109.5	" 104.2	" 106.8	" 120.9	" 120.5	" 115.7	" 115.7	" 106.1	" 109.8	" 110.5
1901.....	" 116.9	" 105.9	" 101.0	" 119.5	" 111.9	" 116.7	" 115.2	" 110.9	" 107.4	" 108.5
1902.....	" 130.5	" 111.3	" 102.0	" 134.3	" 117.2	" 118.8	" 114.2	" 112.2	" 114.1	" 112.9
1903.....	" 118.8	" 107.1	" 106.6	" 149.3	" 117.6	" 121.4	" 112.6	" 113.0	" 113.6	" 113.6
1904.....	" 126.2	" 107.2	" 109.8	" 132.6	" 108.6	" 122.7	" 110.0	" 111.7	" 111.7	" 113.0
1905.....	" 124.2	" 108.7	" 112.0	" 128.8	" 122.5	" 127.7	" 109.1	" 109.1	" 112.8	" 115.9
1906.....	" 123.6	" 112.6	" 112.6	" 120.0	" 131.9	" 135.2	" 140.1	" 101.2	" 121.1	" 122.5
1907.....	" 137.1	" 117.8	" 126.7	" 135.0	" 143.4	" 146.9	" 109.6	" 118.5	" 127.1	" 129.5
1908.....	" 133.1	" 120.6	" 116.9	" 130.8	" 126.4	" 133.1	" 110.4	" 114.0	" 119.9	" 122.8
1909.....	" 163.1	" 124.7	" 119.6	" 129.3	" 124.8	" 138.4	" 112.4	" 111.7	" 125.9	" 126.5
1910.....	" 164.6	" 128.7	" 123.7	" 125.4	" 128.5	" 153.2	" 117.0	" 111.6	" 133.1	" 131.6
1911.....	" 162.0	" 131.3	" 119.6	" 122.4	" 119.4	" 151.4	" 120.3	" 111.1	" 131.2	" 129.2
1912.....	" 171.3	" 139.5	" 120.7	" 133.9	" 126.1	" 148.2	" 122.9	" 113.7	" 133.2	" 133.6
1913.....	" 165.8	" 137.1	" 123.7	" 142.2	" 127.5	" 151.8	" 124.1	" 118.1	" 137.1	" 135.2

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